



QUATERNARY	Star Point	Chinle	Molas
Alluvium	Wahweap	Shinarump 2130	Manning Canyon
Lake beds	Masuk	Moenkopi	Mississippian
Pleistocene	Colorado	Sinbad	Humbug
Lake beds	Sego	PERMIAN	Brazer
TERTIARY	Buck Tongue	Kaibab	Pilot Shale
Pliocene	Castlegate	Coconino	Madison
Salt Lake	Mancos	Cutler	Leadville
Oligocene	Upper	Hoskinnini	Redwall
Norwood	Middle	DeChelly 2470	DEVONIAN
Eocene	Lower	White Rim	Upper
Duchesne River	Emery	Organ Rock	Middle
Uinta	Blue Gate	Cedar Mesa,	Lower
Bridger	Ferron	Halgait Tongue	Ouray
Green River	Frontier	Phosphoria	Elbert
	Dakota	Park City	McCracken
	Burro Canyon	Rico (Goodridge)	Aneth
	Cedar Mountain	Supai	Simonson Dolomite
	Buckhorn	Wolfcamp	Sevy Dolomite
	JURASSIC	CARBON I FEROUS	North Point
Wasatch	Morrison	Pennsylvanian	SILURIAN
Stone Cabin	Salt Wash	Oquirrh	Laketown Dolomite
Colton	San Rafael Gr.	Weber	ORDOVICIAN
Flagstaff	Summerville	Morgan	Eureka Quartzite
North Horn	Bluff Sandstone	Hermosa 4350	Pogonip Limestone
Almy	Curtis		CAMBRIAN
Paleocene	Entrada	Pardox	Lynch
Current Creek	Moab Tongue	Ismay 5190	Bowman
North Horn	Carmel	Desert Creek 5358	Tapeats
CRETACEOUS	Glen Canyon Gr.	Akah	Ophir
Montana	Navajo	Barker Creek	Tintic
Mesaverde	Kayenta		PRE - CAMBRIAN
Price River	Wingate	Cane Creek	
Blackhawk	TRIASSIC		

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL [x] DEEPEN [ ] PLUG BACK [ ]
b. TYPE OF WELL OIL WELL [x] GAS WELL [ ] OTHER [ ] SINGLE ZONE [ ] MULTIPLE ZONE [ ]

RECEIVED

MAR 08 1985

2. NAME OF OPERATOR Phillips Oil Company

3. ADDRESS OF OPERATOR P. O. Box 2920, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State laws) At surface 775' FSL, 1980' FWL (SE SW)

At proposed prod. zone same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\* Approximately 3 miles southeast of Montezuma Creek, Utah

10. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 3300' west of Ratherford Unit Lease Line

16. NO. OF ACRES IN LEASE 1807 Acres

17. NO. OF ACRES ASSIGNED TO THIS WELL 40 Acres

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1183' south of #12-23

19. PROPOSED DEPTH 5700'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 4592' ungraded ground

22. APPROX. DATE WORK WILL START\* First quarter 1985

23. PROPOSED CASING AND CEMENTING PROGRAM

Table with 5 columns: SIZE OF HOLE, SIZE OF CASING, WEIGHT PER FOOT, SETTING DEPTH, QUANTITY OF CEMENT. Rows include 17-1/2", 12-1/4", and 8-1/2" hole sizes.

Approval is requested to drill Ratherford Unit #12-24, a Desert Creek Development oil well. The subject well will be produced for a period of time, then it will be converted to a water injection well.

BOP equipment will be operated daily and tested weekly.

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING DATE: 3/15/85 BY: [Signature] WELL SPACING: A-3 (Unit)

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give well spacing and production zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED [Signature] E. Stuart TITLE Area Manager DATE January 25, 1985

PERMIT NO. APPROVAL DATE

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

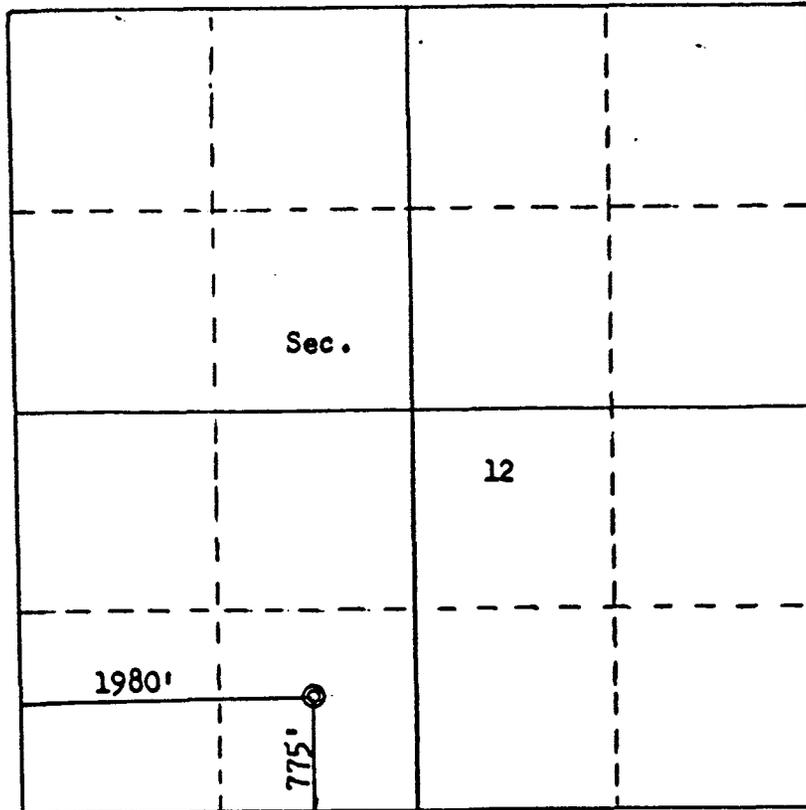
COMPANY PHILLIPS OIL COMPANY

LEASE RATHERFORD UNIT WELL NO. 12-24

SEC. 12 T. 41S R. 23E  
San Juan County, Utah

LOCATION 775'ESL 1980'FWL

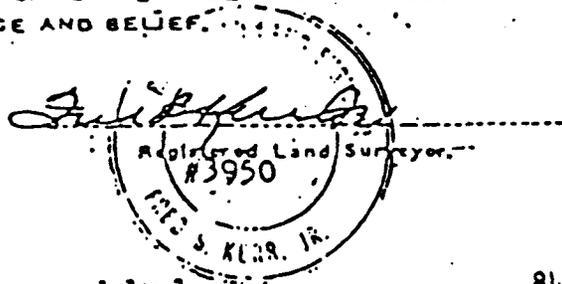
ELEVATION 4592 ungraded ground



SCALE—4 INCHES EQUALS 1 MILE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTE OF ACTUAL SURVEYS MADE BY ME UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SEALS



SURVEYED July 1 1984

RATHERFORD UNIT #12-24

Supplement to Form 9-331C "Application for Permit to Drill, Deepen, or Plug Back."

DRILLING PROGRAM

1. Surface formation is the Dune Sand, which consists of loose windblown sand, age-recent.

Estimated tops of geologic markers:

Shinarump . . . . .	2181'
DeChelly . . . . .	2475'
Hermosa . . . . .	4357'
Desert Creek Zone I . . . . .	5360'

2. Brackish water-bearing sands are expected in the Navajo, Wingate, and DeChelly formations. Oil is expected to be encountered in the Ismay and Desert Creek formations. The top of cement will be approximately at 2000'.
3. Blow-out preventers will be 10" Series 900 equipment to be tested initially to 3000 psi. They will be inspected and operated daily and pressure tested weekly to 1500 psi. Weekly pressure tests will be supervised by representatives of Phillips Oil Company and the drilling contractor. Tests will be recorded on the daily drilling report which will remain on the rig floor during drilling operations. BOP tests will be conducted in accordance with Phillips standards, copy attached.

4. a. Proposed Casing Program:

1. Conductor casing:

100'	13-3/8"	48#/ft	H-40	ST&C	new
------	---------	--------	------	------	-----

2. Surface casing:

1600'	9-5/8"	36#/ft	K-55	ST&C	new
-------	--------	--------	------	------	-----

Surface casing will be tested to 1500# before drilling out.

3. Production casing:

5700'	7"	23# & 26#/ft	K-55	ST&C	new
-------	----	--------------	------	------	-----

Production casing will be tested to 3000#.

b. Proposed Cementing Program:

1. Conductor Casing:

Conductor casing will be cemented with 150 sks Class B cement. Cement will be brought to surface.

2. Surface Casing:

Surface casing will be cemented with 300 sks "light" cement followed with 300 sks Class B cement. Cement will be brought to surface.

3. Production casing:

Production casing will be cemented with "light" cement followed with Class B cement. For cement volume, caliper will be used with 15% excess. The top of the cement should be around 2000'. If other zones with hydrocarbon potential are encountered, they will be covered with cement.

c. Auxiliary Equipment:

Auxiliary equipment will include upper and lower kelly cocks, a drill string safety valve, and a pit level indicator.

5. Drilling Fluid:

Drilling fluid will be a fresh water based mud system. Spud mud is gel and water with a weight of 8.4-8.8 ppg. From the surface to approximately 1600', gel and water will be used. Mud weight may be up to 9 ppg to control water flow from the Wingate formation. A slurry of 8.6-9.5 ppg, 32-38 viscosity, and less than 15cc/30 min. water loss will be used from 1600'-5200'. Mud weight may be increased to 10.4 ppg if a water flow is encountered. From 5200' to total depth mud properties will be 10.5-12.5 ppg, 40-45 viscosity, and below 10 cc water loss.

Adequate quantities of mud materials will be stored at the location to equal the volume of the rigs complete circulating system. A flow sensor will be used.

6. Testing, logging, and coring:

The logging program will consist of DLL, GR, SP, and Caliper from T. D. to the surface casing. A FDC/CNL and a Micro-proximity log will be run from T. D. to 4300'. A temperature or cement bond log will be run to determine cement top. No coring or drill stem tests are planned.

7. Downhole Conditions:

Drilling in the area indicates no abnormal pressures, temperatures, or hydrogen sulfide gas.

8. Phillips anticipates starting operations in the first quarter of 1985. Drilling operations are estimated to take fifteen days per well.

#### CULTURAL RESOURCE REPORT

Abajo Archaeology has prepared a cultural resource inventory of the subject wellsite. A copy of the report has been sent to the BLM Farmington office. Pertinent information regarding the subject well is attached.

The cultural resource inventory was performed with the idea of the subject well being a water injection well. It is now proposed to initially produce the subject well for a period of time. A plat of the proposed leadline is attached. The proposed leadline route will follow water injection routes as outlined in the August 1984 Abajo Archaeology Report and tie into existing leadlines. When the subject well is converted to a water injection well, a Sundry Notice will be submitted.

#### SURFACE USE PROGRAM

1. Existing Roads

- a. Access to existing lease roads is approximately 3 miles southeast of Montezuma Creek, Utah.
- b. The existing roads will be maintained in the same or better condition.
- c. Refer to the attached access road map for road information.

2. Access Roads

Planned upgrading of existing access roads is shown on the attached map.

3. Location of Existing Wells.

Locations of existing wells are shown on the attached maps.

4. Production from the proposed well will be piped to Ratherford Unit Tank Battery #2, located in the NW SE Sec. 12-T41S-R23E San Juan County, Utah. The flowline will be visible from the existing lease roads. A plat of the proposed leadline is attached.

5. Water Supply

- a. The source of water to drill the subject well is from the River Booster, NE/4 Sec. 5., or from the Water Injection Plant, SE/4 Sec. 17 in T41S-R24E, San Juan County, Utah.
- b. The drilling water will be trucked from the water source to the subject well.
- c. A water supply well will not be drilled on the lease.

6. Construction Materials

- a. Only native soils will be used for construction of wellsite and the access road.
- b. Pit run rock will be used on the wellsite and access road when needed.
- c. The above materials are owned by the Navajo Tribe.

7. Waste Disposal

- a. Cuttings: Cuttings will be contained in a fenced reserve pit until dry enough to cover. Upon abandonment, the reserve pit area will be backfilled, shaped to natural topography, and seeded.
- b. Drilling Fluid: Drilling fluid will be contained in a fenced reserve pit until dry enough to cover. Upon abandonment, the reserve pit area will be backfilled, shaped to natural topography, and seeded.
- c. Garbage/Trash: All garbage and trash will be put in the burn pit. The burn pit will be fenced on four sides. After the burn pit is no longer in use, the trash and garbage will be covered with a minimum of 4 feet of fill.
- d. Salt: No salts are anticipated on this well. If salt is present, it will be disposed of in the reserve pit.
- e. Chemicals: Chemicals will be disposed of in the reserve pit.
- f. Sewage: Dry chemical toilets will be used.

8. Ancillary Facilities

No ancillary facilities are required.

9. Well Site Layout.

- a. Refer to attached Rig Layout plat
- b. There are no plans to line the reserve pit unless porous soil materials are encountered during construction.

10. Surface Reclamation Plans

- a. Construction Program: A cross section of the drill site showing cuts and fills is attached.
- b. Well Abandonment: All disturbed areas will be shaped to the natural topography and seeded in accordance with BLM requirements.

- c. Producing Well: Those areas not needed for production purposes will be recontoured to the surrounding topography. Seeding will be in accordance with BLM requirements.
- d. Pipelines and flowlines: Flowlines will be above ground and follow or be visible from existing roads.
- e. Rehabilitation will begin as soon as possible, considering weather and other factors, and proceed per recommendation of the BLM. The reserve pit will be reclaimed once it dries.

11. Surface Ownership: The wellsite location, access road and leadline are on the Navajo Indian Reservation. No dwellings are in the proposed drilling area.

12. Other information:

The reserve pit will be fenced on three sides during drilling and on the fourth side after the rig is moved out.

13. Operator's Representative and Certification.

a. Field Representative:

A. E. Stuart  
P. O. Box 2920  
Casper, Wyoming 82602  
307-237-3791

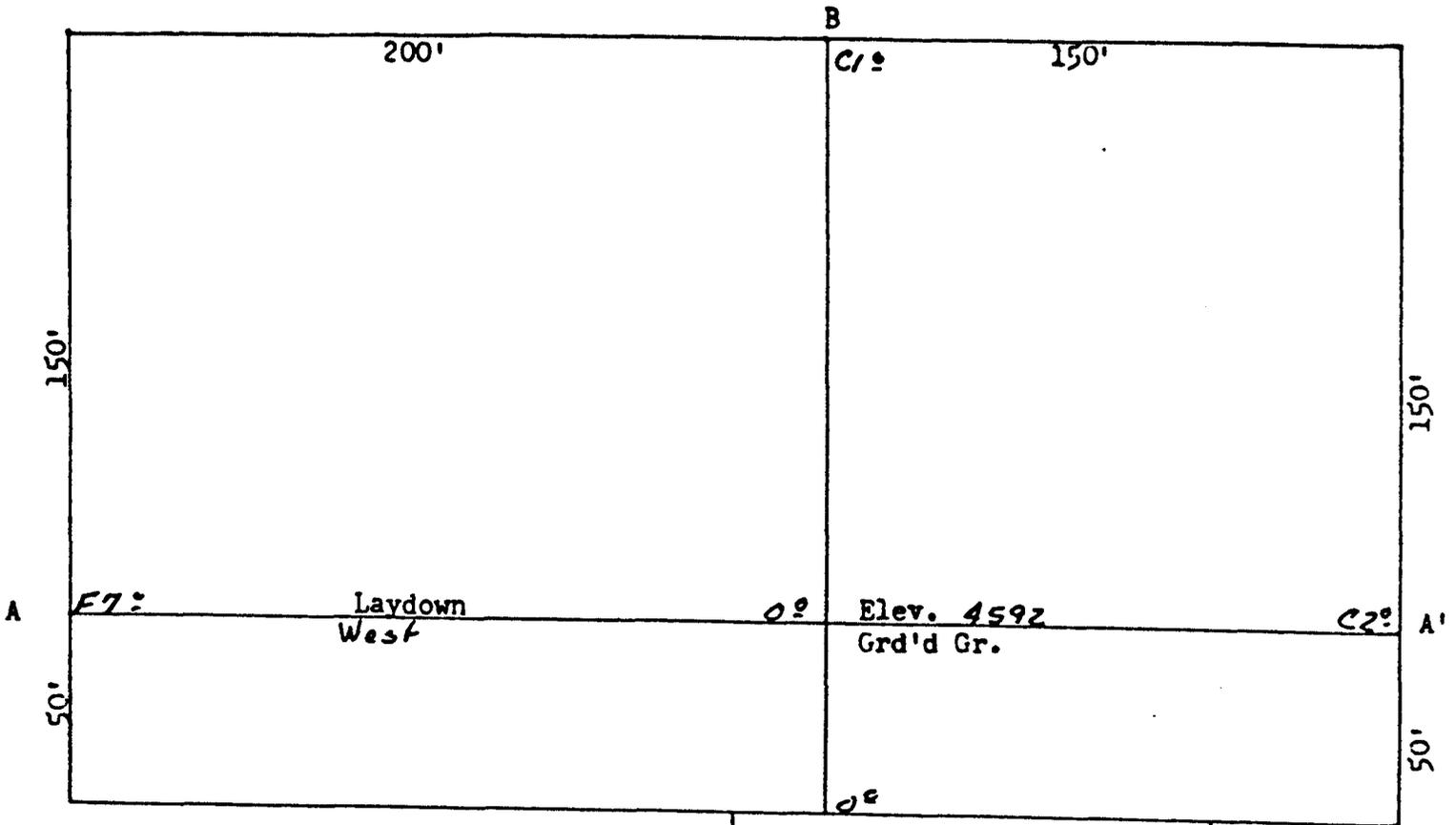
I hereby certify that I or persons under my direct supervision have inspected the proposed drill site and access route; and I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge true and correct; and that the work associated with operations proposed herein will be performed by Phillips Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of the 18 U.S.C. 1001 for the filing of a false statement.

Date 3-6-85

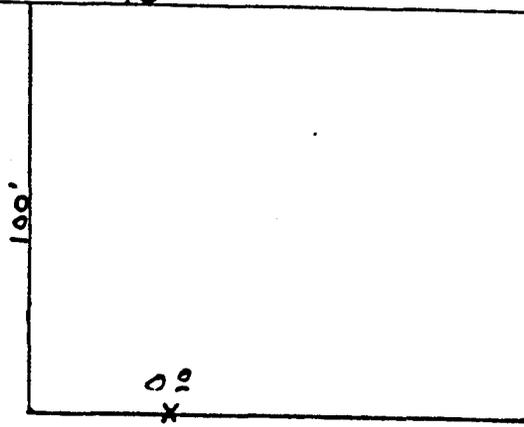
  
A. E. Stuart  
Area Manager

BJM/fb (18)  
Casper - RC

Profile for  
 PHILLIP OIL COMPANY #12- 24 RATHERFORD IT  
 775' FSD 1980' FWL Sec. 12-T41S-R23E  
 SAN JUAN COUNTY, UTAH

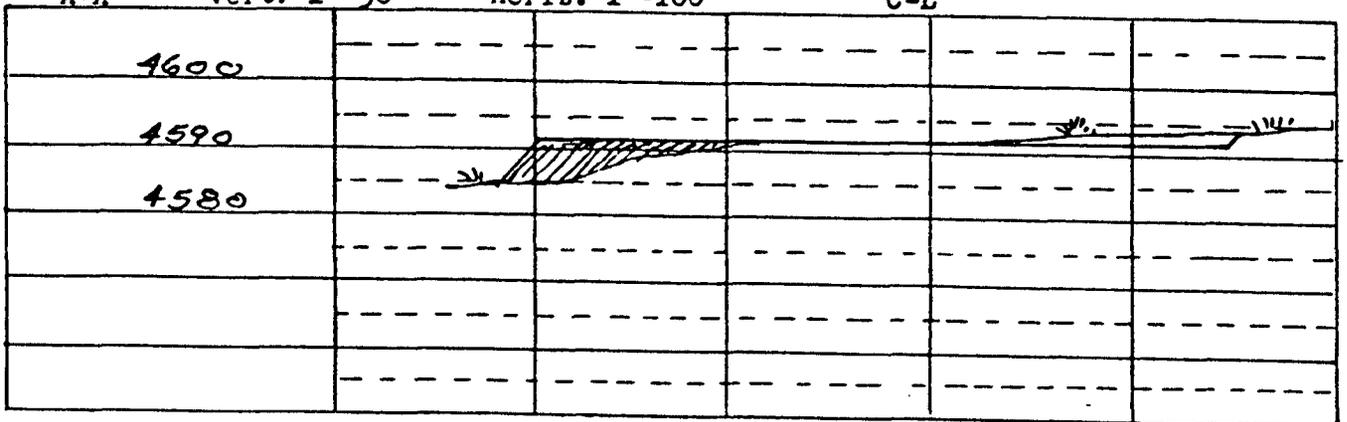


Scale: 1"=50'

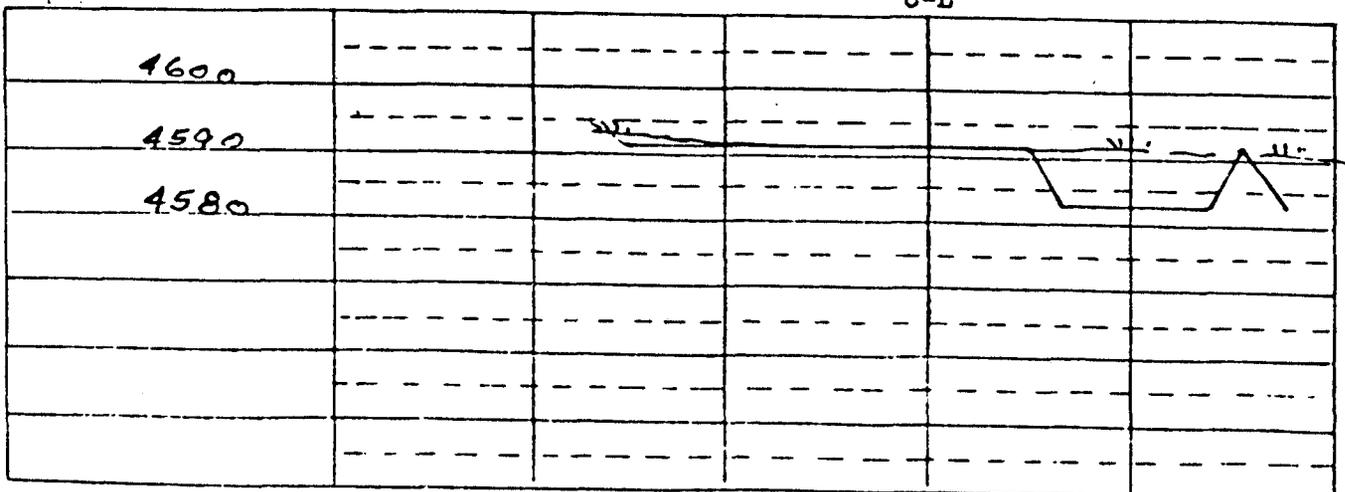


B' 125'

A-A' Vert: 1"=30' Horiz: 1"=100' C-L



R-P' C-L

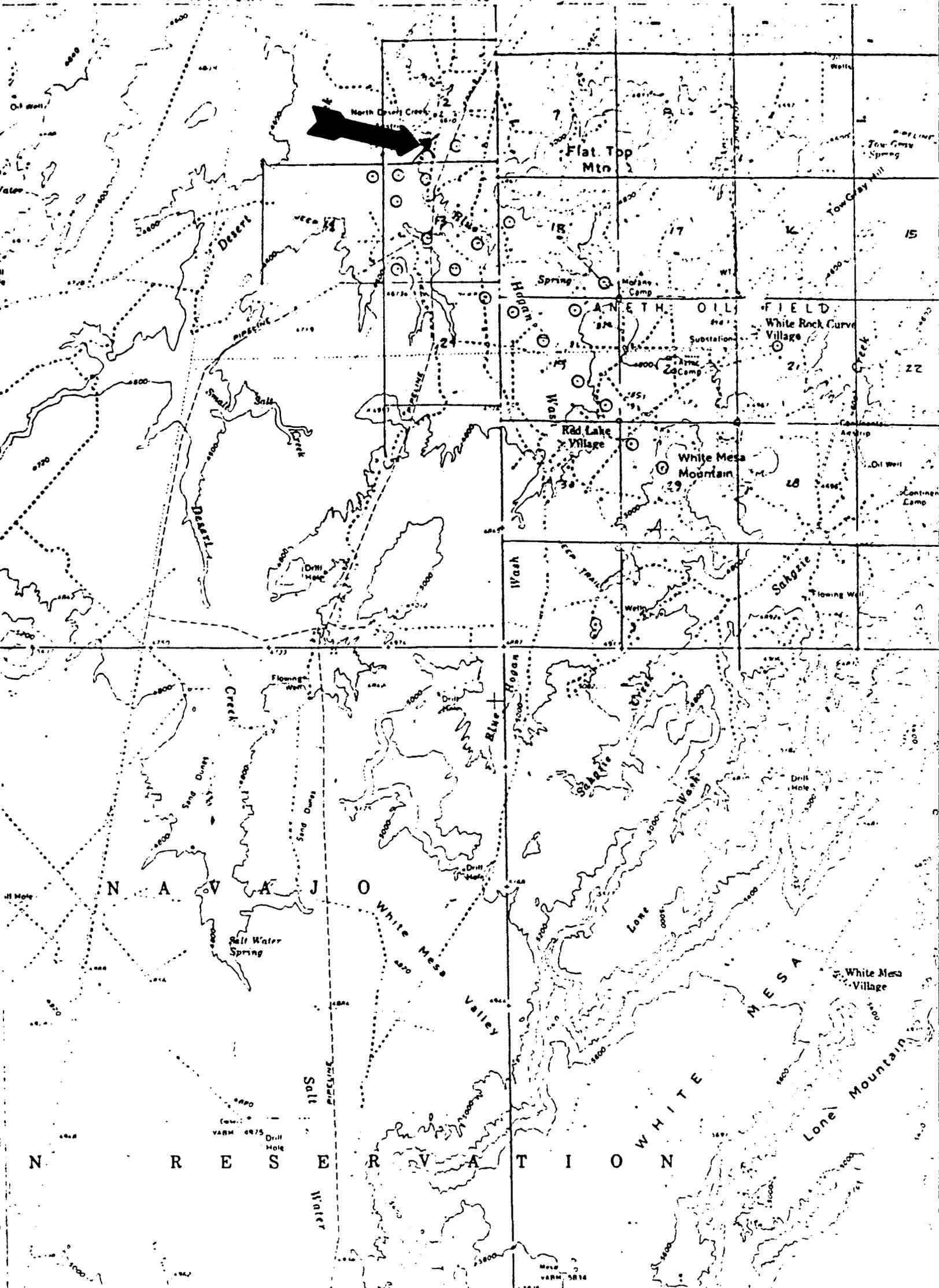


47 48 49 50 51 52 53

MONTEZUMA CREEK

20 21 22

MONTEZUMA CREEK



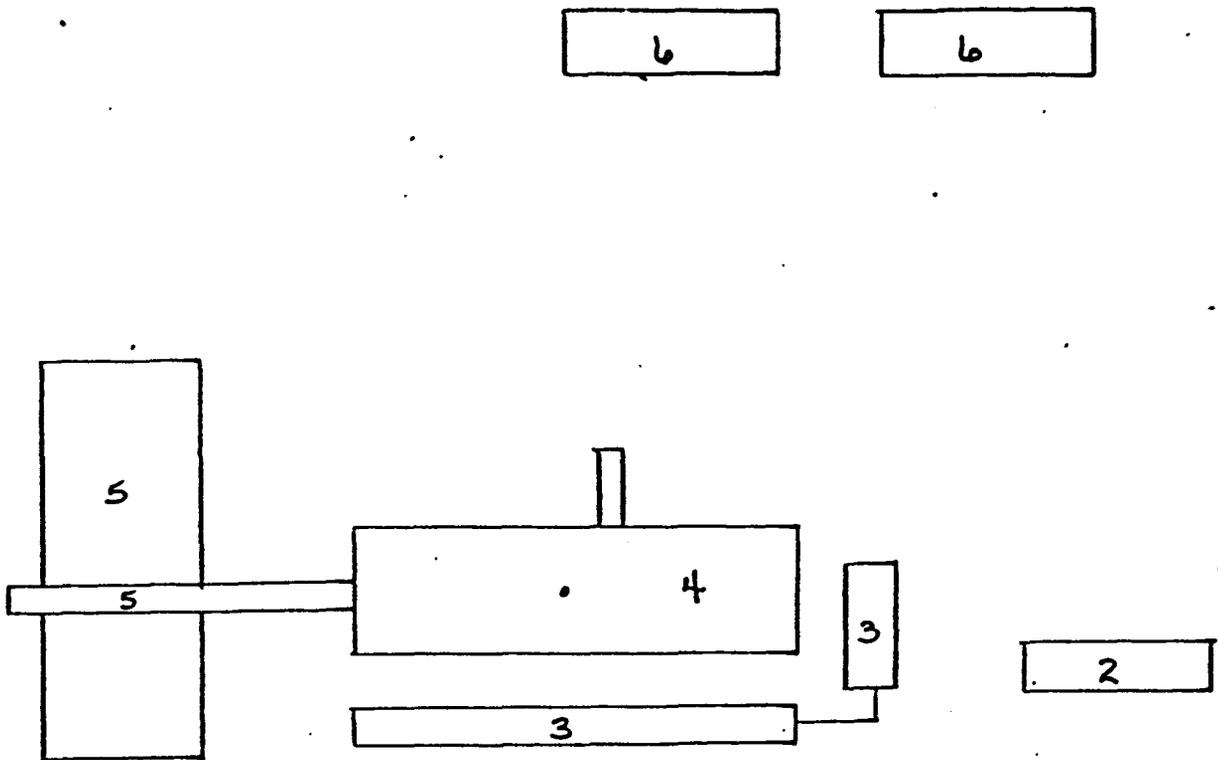
Vicinity Map for  
 PHILLIPS OIL COMPANY #12-24 RATHERFORD UNIT  
 775' FSL 1980' FWL Sec. 12-T41S-R23E  
 SAN JUAN COUNTY, UTAH



RATHERFORD UNIT:

#12-24

SE SW Sec. 12-T41S-R23E

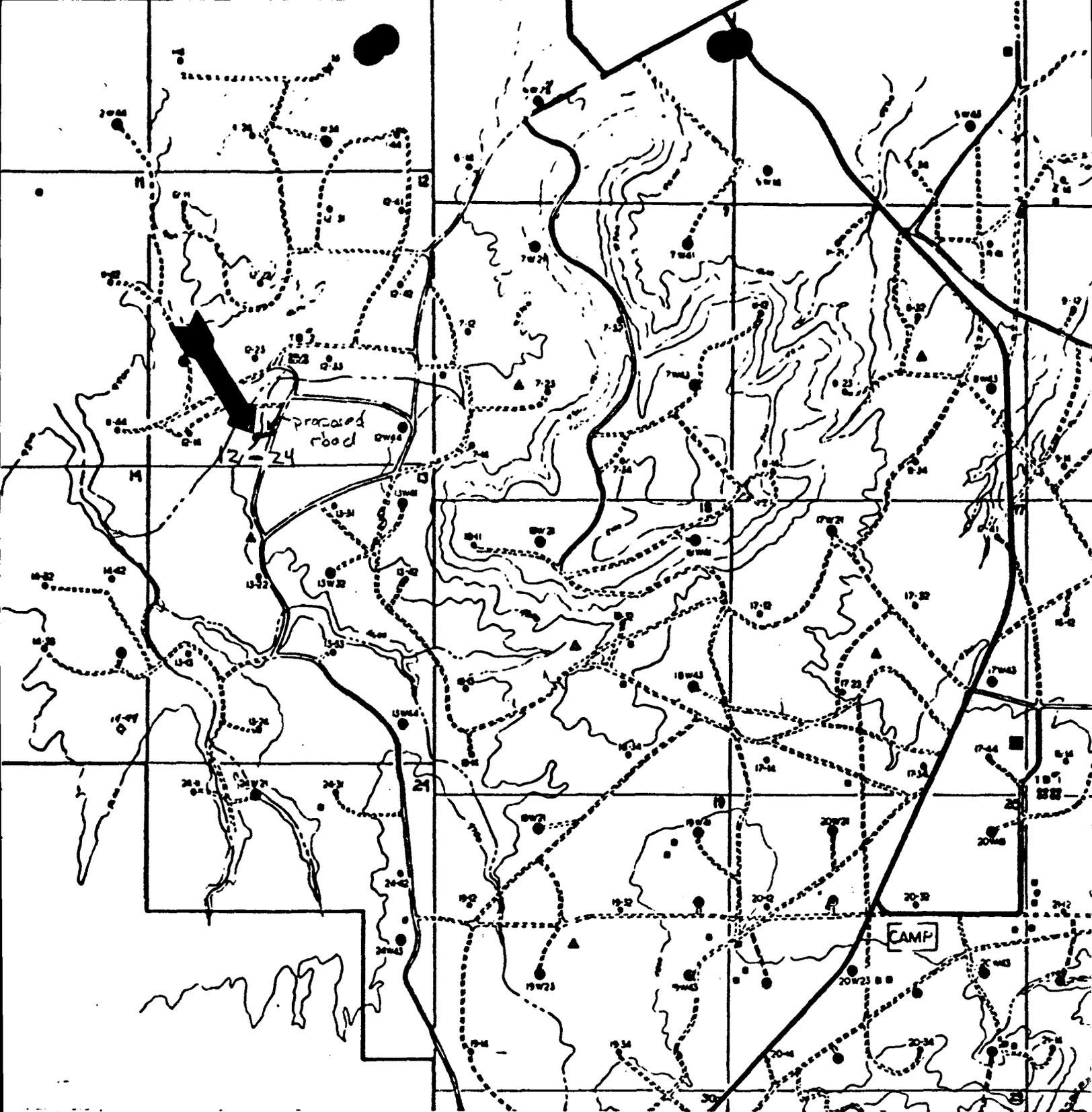


- 1. RESERVE PIT
- 2. TRASH PIT
- 3. CIR. PITS & PUMP
- 4. RIG
- 5. CAT WALK & PIPE RACKS
- 6. TRAILERS

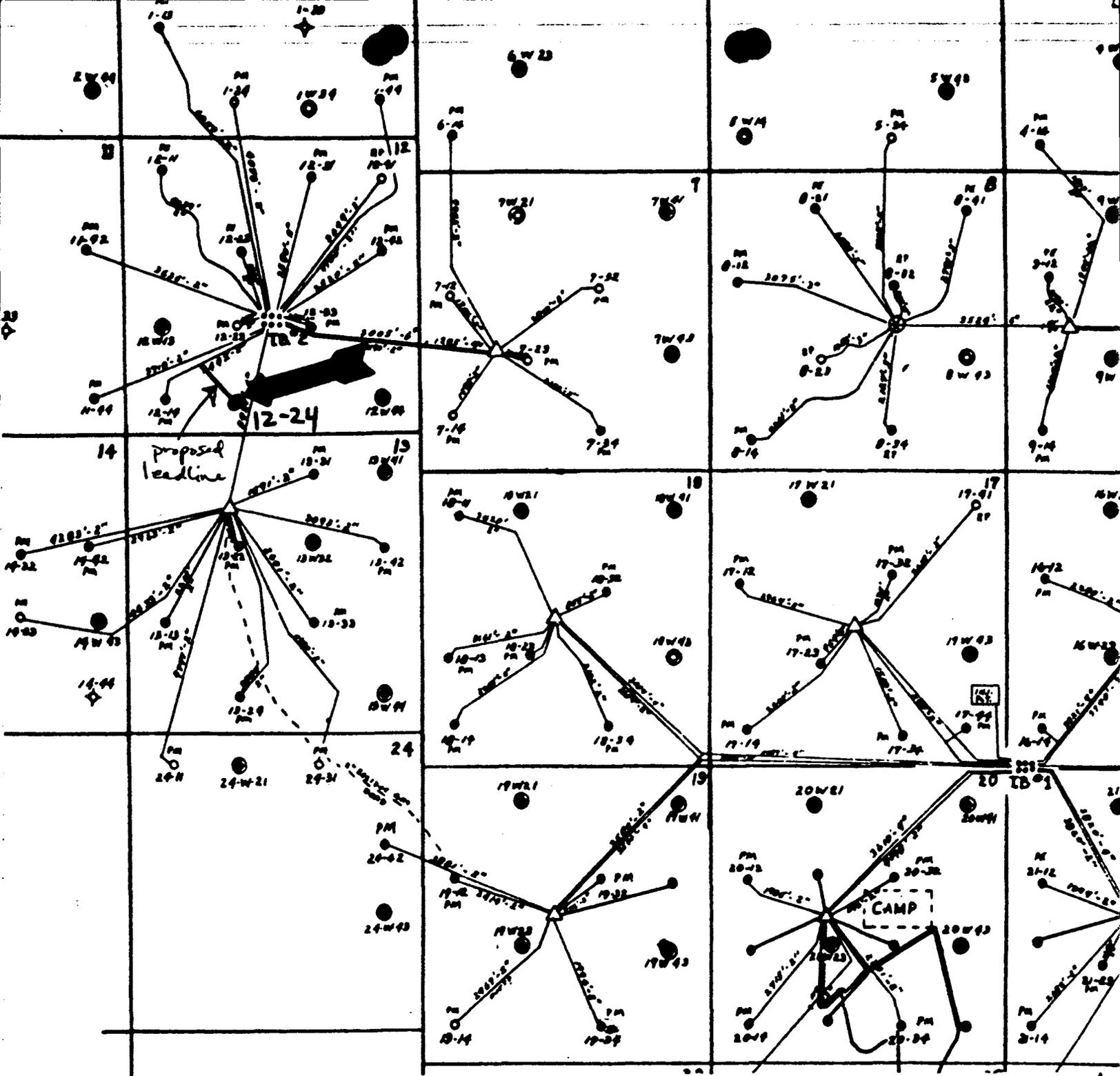
DRILLING RIG LAYOUT

OUTLINE OF LOCATION - APPROXIMATELY 300' x 350'  
NOT TO SCALE

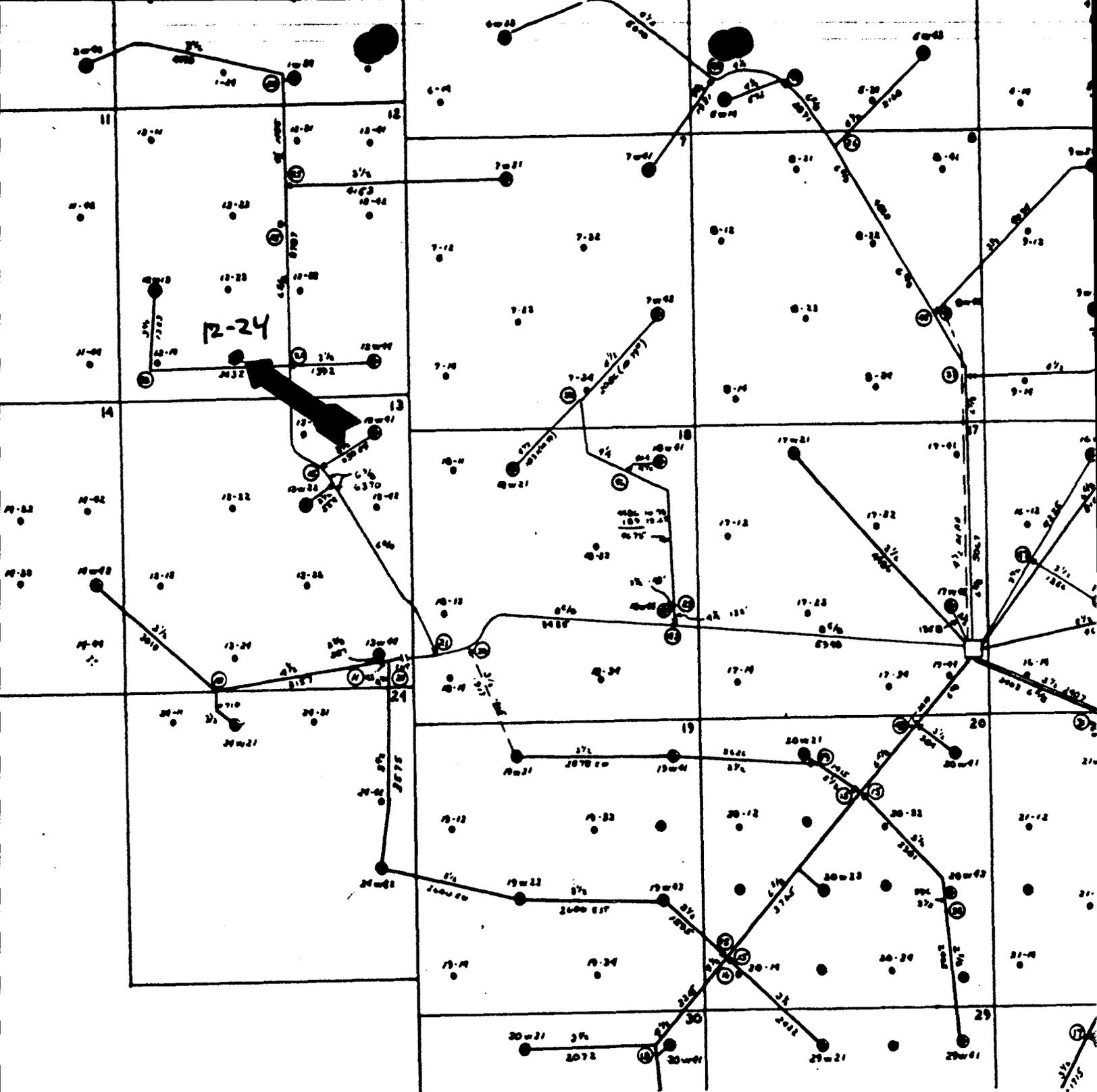




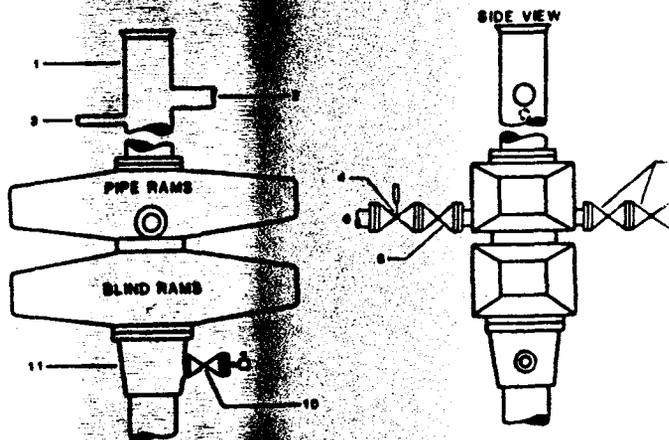
NO.	REVISION	BY	DATE	CHKD	APP'D
FOR BIDS	 <b>PHILLIPS PETROLEUM COMPANY</b> BARTLESVILLE, OKLAHOMA		JA NO.	FILE CODE	
FOR APPR			AFE NO.	SCALE	
FOR CONST				2.2" = 1/4 mi	
DRAWN 3-30-84	RATHERFORD UNIT WELL 12-24 PROPOSED ROAD PLAT SE SW SEC 12 T41S-R23E SAN JUAN CO., UTAH		DWG NO.		
CHECKED			SH NO.		
APP'D					



NO.	REVISION	BY	DATE	CHKD	APP'D
FOR BIDS	 <b>PHILLIPS PETROLEUM COMPANY</b> BARTLESVILLE, OKLAHOMA 	JA NO.	FILE CODE		
FOR APPR		AFE NO.	SCALE 2.2" = 1 mi		
FOR CONST		DWG NO.	SH NO.		
DRAWN 1-20-85 BJM	<b>RATHERFORD UNIT WELL 12-24</b> <b>PROPOSED LEADLINE PLAT</b> <b>SE SW SEC. 12 T41S-R23E</b> <b>SAN JUAN CO., UTAH</b>				
CHECKED					
APP'D					



NO.	REVISION	BY	DATE	CHKD	APP'D
FOR BIDS	 <b>PHILLIPS PETROLEUM COMPANY</b> 			JA NO.	FILE CODE
FOR APPR	BARTLESVILLE, OKLAHOMA			AFE NO.	SCALE 2.2" = 1 mi
FOR CONST	<b>RATHERFORD UNIT WELL 12-24</b> <b>SE SW SEC. 12 T41S-R23E</b> <b>SAN JUAN CO., UTAH</b>			DWG NO.	
DRAWN 1-20-85 BJM				SH NO.	
CHECKED					
APP'D					



- PRE-OPERATED CHOKE LINE
- VALVE
- LINE TO MANIFOLD
- VALVES
- LINE
- GATE VALVE WITH NEEDLE
- HOUSING

Figure 7-10 Standard Hydraulic BOP  
(2 M or 3 M Working Pressure) Alternative

Assembly  
(Filling Spool)

Well Control 4  
January/83

Page 251  
Section II

PHILLIPS PETROLEUM COMPANY

## 7.6 Testing Surface Blowout Preventer Equipment

### 7.6.1 Pressure Test Frequency

All rams, annulars, valves, choke and kill lines, choke manifold, kelly cocks, and safety valves shall be pressure tested at the following frequencies:

- (1) Initial installation of blowout preventers.
- (2) After setting casing, before drilling cement.
- (3) Every 7 days or on first trip out of hole after 7 days since previous pressure test.
- (4) After any component of the blowout preventer assembly is disturbed, replaced or repaired (this includes lines, valves, or choke manifold). In this case, the component changed may be the only component tested.
- (5) Prior to conducting first drill stem test in a series of one or more DST's.
- (6) Any time the Phillips Wellsite Supervisor deems necessary, such as prior to drilling into suspected high pressure zones.



## 7.6.2 Function Test Frequency

All rams, annulars, valves, and other items specified below, shall be function tested at the following frequencies.

- (1) On initial installation from driller control and remote panel.
- (2) Each trip out of hole alternating between driller's and remote control panel but not more than once every twenty-four (24) hours. Close pipe rams or annular preventer ONLY on drill pipe.

## 7.6.3 Test Pressures

Use the following table to identify which test is appropriate and at what pressure.

TEST	DESCRIPTION
Low Pressure	Test to 200-300 psi prior to each high pressure test.
Initial Installation	<p>Test all rams, annulars, valves, choke manifold, kelly cocks, and safety valves to the lesser of the following pressures.</p> <ul style="list-style-type: none"> <li>. Rated working pressure of the component in the blowout preventer assembly with the exception of annular preventer which is to be tested to 70% of the rated working pressure.</li> <li>. The API rated casing burst pressure of the last casing to be utilized in the well with the BOP assembly being tested.</li> <li>. Rated working pressure of the casing head.</li> <li>. If "Cup Tester" is used do not exceed 80% of the API rated burst pressure of the casing.</li> </ul>
Repair	Repaired or replaced components are to be tested to the same pressures used in the Initial Test.



7.6.3, cont'd

TEST	DESCRIPTION
Weekly and After Setting Casing	<p>Test all rams, annulars, valves, choke and kill lines, choke manifold, kelly cocks, and safety valves, to the lesser of the following pressures.</p> <ul style="list-style-type: none"> <li>. 50% of the rated working pressure of the component to be tested.</li> <li>. 80% of the API rating of the casing burst pressure then in the well.</li> <li>. Test blind rams during internal casing pressure test. (Refer to drilling program for test pressures).</li> </ul>
DST Operations	<p>Test all pipe rams, annular preventers, valves, choke and kill lines, choke manifold, kelly cocks, and safety valves to the maximum anticipated surface pressure expected while conducting drill stem tests. Do not test annular to more than 70% of its working pressure.</p>
Shallow Casing	<p>Where cased hole is less than 2000 feet measured depth, the test pressure may be 1.5 psi per foot of casing depth, not to exceed 80% of the API rated burst pressure. In the case of shallow conductor casing or drive pipe (500 feet or less) that is equipped with one BOP, then the test pressures do not need to exceed 1.0 psi per foot of casing depth.</p>
Accumulator	<p>Test accumulator to the manufacturer's rated working pressure. Test the accumulator for time to pump up to specifications.</p>

7.6.4 Blowout Preventer Test Practices

- (1) All pressure tests shall be witnessed by Phillips' Representative and the Contractor's Senior Supervisor on Location. All tests shall be recorded on the Phillips' Daily Drilling Report, the IADC Report and the BOP Test Form; see Figure 7-13. A reproducible copy of the BOP Test Form (Figure 7-13) can be found in Section III.



## 7.6.4, cont'd

- (2) Hold all low pressure tests for three minutes and high pressure tests for five minutes or until Phillips Representative and the Contractor's Senior Supervisor are satisfied no leaks exist.
- (3) A detail procedure for the testing of blowout preventer and choke manifold equipment will be included in the drilling programs. The procedure is to be distributed for each drilling unit under contract by the operating office. Each operating office must include the following practices:
- a. Prior to testing, all lines and valves will be thoroughly flushed to ensure the system is clear. Test all opening and closing control lines to 1500 psi and inspect for leaks.
  - b. If necessary, run a stand of drill collars below the test plug to prevent unseating the test tool during testing.
  - c. All precautions must be taken to avoid pressuring the casing below the test tool.
  - d. The running string is to be full of water (or antifreeze solution) for immediate indication of test tool leakage.
  - e. All pipe rams, blind/shear rams, blind rams, annular preventers, valves, fail-safe valves, choke and kill lines are to be tested at the frequencies and pressures outlined in this section.
  - f. Drill pipe safety valve, lower and upper kelly cocks are to be tested from below at pressures and frequencies outlined in this section.
  - g. All test fluids are to be bled back to the pump unit in safe manner.

## 7.6.5 Testing Wellhead Pack-offs

The wellhead pack-off is to be pressure tested upon installation for five minutes. Test pressure is to be 80% API rated casing collapse or the rated working pressure of the casing head whichever is the lesser. Casing annulus valve(s) must be in open position to prevent casing collapse during pack-off testing.

When testing the wellhead pack-off, use recorded test pressures and volumes to determine if pack-off is leaking. Pressure should be immediately released at the first indication of a leak.



### 7.6.6 Safety Precautions

One pumping unit operator is to be stationed at the high pressure pumping unit, and is to remain at this station until all testing has been completed. The pump unit operator is to be in continuous communication with the person who is recording the test data. The Phillips Wellsite Supervisor and Contractor's Senior Supervisor on location will be the only personnel who will go into the test area to inspect for leaks when the equipment involved is under pressure. The rig crews are to stay clear of the area until such time that both the Phillips Wellsite Supervisor and the Contractor's Senior Supervisor have contacted the pumping unit operator and all three have agreed that all pressure has been released, and there is no possibility of pressure being trapped. The rig crews may then go into the area to repair leaks or work as directed.

All lines, swings, and connections that are used in the testing of the blowout preventers are to be adequately secured in place.

Pressure is to be released only through the pressure release lines that are vented back into the pump unit tanks. The lines are to be clamped down to direct the flow into unit tanks.



ARCHAEOLOGICAL SURVEYS OF 13 PROPOSED WELL LOCATIONS,  
THEIR ASSOCIATED ACCESS ROADS AND FLOW LINE ROUTES,  
AND 9 MILES OF PROPOSED WATER INJECTION LINE ROUTES  
IN SAN JUAN COUNTY, SOUTHEASTERN UTAH

12-W24  
12-34  
14-41  
13-11

13-12  
13-14  
13-21  
13-23  
13-34

13-43  
18-W12  
24-41  
29-22

Water Injection Lines: Mainline and Lines A, B, C,  
D, E, F, F-1, G, H, I, and J

Prepared by:

Debra Foldi  
Archaeological Consultant

Prepared for:

Phillips Oil Company  
Cortez, Colorado

Submitted by:

William E. Davis, Director  
Abajo Archaeology  
Bluff, Utah

August 1984

Navajo Nation Antiquities Permit No. 1984-24  
United States Department of the Interior  
Bureau of Indian Affairs  
Branch of Environmental Quality Control Authorization  
BIA-NAO-84-ABA-048-1  
and  
Utah State Permit No. U-84-8-5-i

## TABLE OF CONTENTS

ABSTRACT.....	iv
INTRODUCTION.....	1
DESCRIPTION OF PROJECT AREA.....	6
CULTURE HISTORY.....	7
METHODOLOGY.....	8
RESULTS.....	14
RECOMMENDATIONS.....	22
REFERENCES CITED.....	23
APPENDIX: Site form SJC-1106	

## LIST OF FIGURES

FIGURE 1.....	2
FIGURE 2.....	9
FIGURE 3.....	10
FIGURE 4.....	15
FIGURE 5.....	18
FIGURE 6.....	19
FIGURE 7.....	20
FIGURE 8.....	21

## LIST OF TABLES

TABLE 1.....	3
TABLE 2.....	4
TABLE 3.....	11,12
TABLE 4.....	13
TABLE 5.....	16,17

## ABSTRACT

Cultural resource surveys were conducted as part of the Rutherford Unit expansion project for Phillips Oil Company, in southeastern San Juan County, Utah. The surveys were performed on August 4, 6, 7, 9, and 11, 1984 on 13 proposed well location sites, eight associated access roads, portions of six associated flow line routes, and along nine miles of proposed injection line. The project area occurs in Sections 11, 12, 13, 14, and 24 in T 41 S, R 23 E and Sections 7, 17, and 18 in T 41 S, R 24 E, USGS White Mesa Village Quadrangle, Utah, 15'. It is under jurisdiction of the Bureau of Indian Affairs.

Seventeen isolated finds and one Anasazi Basketmaker II to Pueblo I artifact scatter (SJC-1106) were located during the survey. The isolated finds are not considered significant in terms of the eligibility criteria set forth in the National Register of Historic Places, thus, archaeological clearance is recommended for the project area, except the 100 meters of mainline injection pipeline east of its juncture with line J. It is recommended that the pipeline be rerouted or that an archaeologist be present to monitor construction of that portion of pipeline.

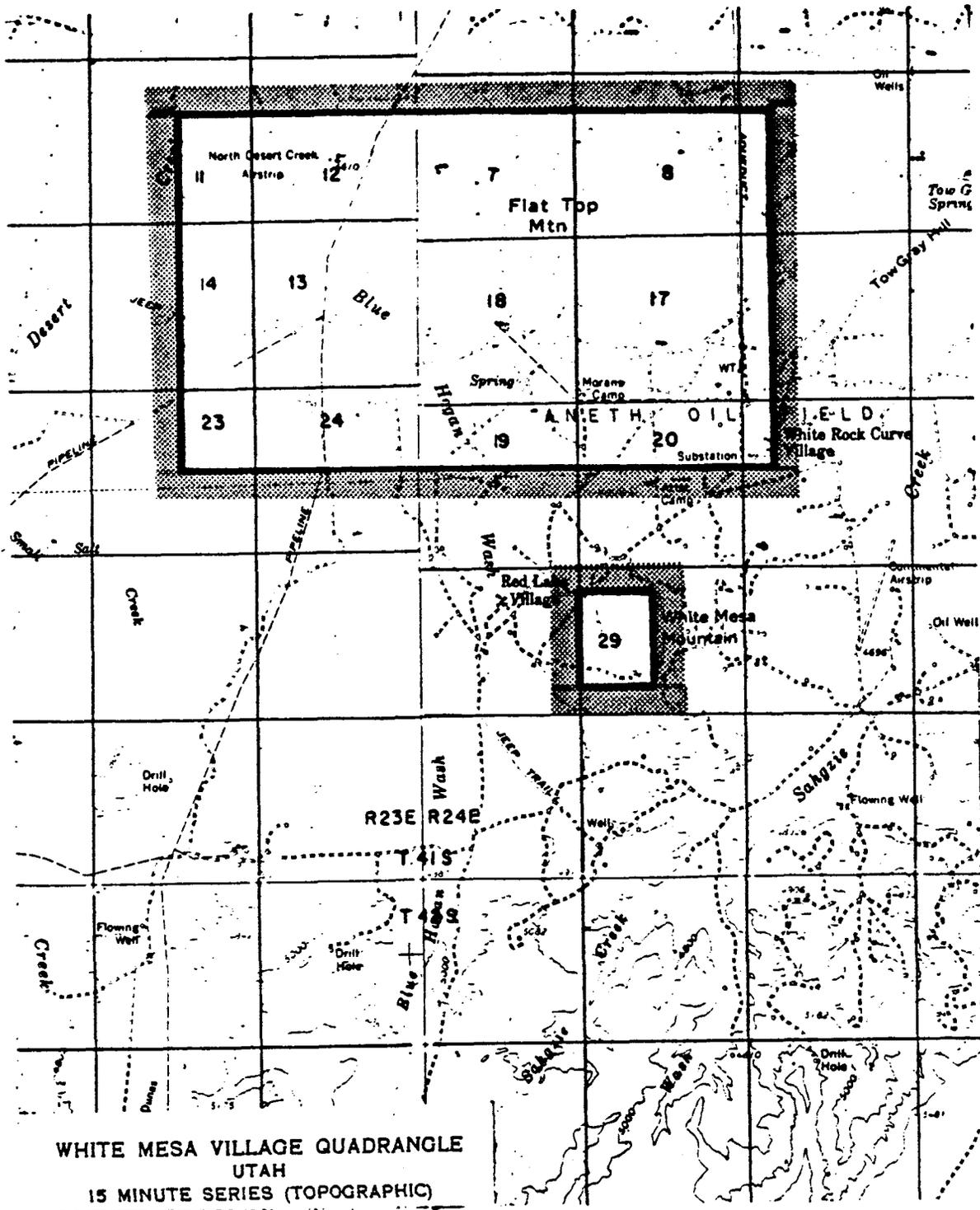
## INTRODUCTION

On August 4, 6, 7, 9, and 11, 1984, cultural resource surveys were conducted within the Rutherford Unit south of Montezuma Creek, southeast San Juan County, Utah (Figure 1). The surveys were requested by Mr. Max Issacs, supervisor of Phillips Oil Company of Cortez, Colorado, and carried out at the request of Mr. Bob Hogg, engineer, and Mr. John White<sup>WEICHENBRODT</sup>, who replaced Mr. Max Issacs. Both Mr. Hogg and Mr. White<sup>WEICHENBRODT</sup> were present in the field during portions of the survey. Mr. Hogg assisted the archaeologist by flagging the access routes and flow lines during the survey. The project consisted of 13 proposed well locations, their associated access routes and flow lines, and approximately nine miles of proposed injection pipeline.

The project area lies within the boundaries of the Navajo Reservation (Tables 1 and 2) which is under the jurisdiction of the United States Department of the Interior, Bureau of Indian Affairs and the Navajo Nation. Cultural resources are administered by the USDI-BIA, Branch of Environmental Quality and by the Navajo Nation Cultural Resource Management Program.

The purpose of the survey was to verify the presence of and document any cultural resources within the proposed project impact areas. The accomplishment of these objectives fulfills compliance requirements for the preservation of archaeological and historical resources set forth by the American Antiquities Act of 1906, the Historic Preservation Act of 1966, the National Environmental Policy Act of 1969, Executive Order No. 11593 of 1971, the Archaeological and Historical Conservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Cultural resources occurring on Navajo Tribal lands are further protected by Tribal laws: CJA-16-72 of 1972, Res. ACAP-86-77 of 1977, and the Navajo Tribal Code, Title Nineteen, Sections 1002 and 1004.

Field work was conducted under the Navajo Nation Antiquities Permit No 1984-24, the USDI-BIA, Environmental Quality Authorizaion No. BIA-NAO-84-048-1, and State of Utah Permit No. U-84-8-5-i. These permits and authorizations were granted to Abajo Archaeology of Bluff, Utah. BIA-NAO-84-ABA-048-1 is a "non-collection, non-disturbance" use authorization to conduct archaeological surveys on Navajo Tribal lands. The surveys were performed by Debra Foldi, an archaeological consultant with Abajo Archaeology. Dr. Anthony Klesert, Director of the Navajo Nation Cultural Resource Management Program and Mr. Terry



WHITE MESA VILLAGE QUADRANGLE  
 UTAH  
 15 MINUTE SERIES (TOPOGRAPHIC)

Figure 1. Location of Phillips Oil Company Rutherford Unit - 1984 expansion project. Stippling outlines project area.

Map Scale: 1:62,5000

TABLE 1

## Legal Description of Project Area

Jurisdiction: Navajo Nation  
 Map: White Mesa Village Quadrangle, Utah, 1962, 15'

Well Pad	Legal Location	UTM (Zone 12)	Access Route, Length
12-W24	CTSESW, Sec.12 T 41 S, R 23 E	647,000 m E 4,121,825 m N	300 feet (runs west from location)
12-34	SESWE, Sec.12 T 41 S, R 23 E	647,700 m E 4,121,800 m N	600 feet (runs SSW from location)
14-41	NENENE, Sec.14 T 41 S, R 23 E	646,250 m E 4,121,950 m N	1000 feet (runs west from location)-flow line follows access
13-11	CTNWNW, Sec.13 T 41 S, R 23 E	646,600 m E 4,121,950 m N	800 feet (runs north from location)-flow line follows access
13-12	NWSWNW, Sec.13 T 41 S, R 23 E	646,600 m E 4,121,075 m N	1300 feet (runs west from location)-flow line follows access
13-14	CTSWSW, Sec.13 T 41 S, R 23 E	646,600 m E 4,120,175 m N	800 feet (runs WSW from location)
13-21	CTNENW, Sec.13 T 41 S, R 23 E	647,000 m E 4,121,400 m N	No access surveyed No flow line surveyed
13-23	CTNWSW, Sec.13 T 41 S, R 23 E	647,000 m E 4,120,600 m N	No access surveyed No flow line surveyed
13-34	CTSWSE, Sec.13 T 41 S, R 23 E	647,700 m E 4,120,200 m N	600 feet (runs south from location)-flow line follows access
13-43	SWNESE, Sec.13 T 41 S, R 23 E	647,750 m E 4,120,500 m N	600 feet (runs NNE from location)-flow line follows access
18-W12	CTSWNW, Sec.18 T 41 S, R 24 E	648,225 m E 4,120,300 m N	500 feet (runs ENE from location)-flow line follows access
24-41	CTNENE, Sec.24 T 41 S, R 23 E	647,825 m E 4,119,800 m N	No access surveyed No flow line surveyed
29-22	SWSENW, Sec.29 T 41 S, R 24 E	650,080 m E 4,117,600 m N	900 feet (runs east from location)-flow line follows access

TABLE 2

## Legal Descriptions of Water Injection Lines

Jurisdiction: Navajo Nation

Map: USGS White Mesa Village Quadrangle, Utah, 1962, 15'

Line	Legal Location	Length (Ft.)
Main	SE & SW of SE, SE & SW of SW, Sec.17, T41S, R24E SE & SW of SE, SE & SW of SW, Sec.18, T41S, R24E SE & NW of SE, SE & NW of NW, Sec.13, T41S, R23E SE of SE, Sec.11, T41S, R23E	18,500
A	SE & NE of SE, Sec.17, T41S, R24E	1,250
B	Eastern portion of: SE & NE of SE and SE & NE of NE and NENW of NE, Sec.18, T41S, R24E	6,900
C	SE & NE of SW, Sec.18, T41S, R24E	1,400
D	SW & NW of SW, SW of NW, Sec.18, T41S, R24E SE of NE, Sec.13, T41S, R23E	3,250
E	SE of NW, NW & NE of NE, Sec.13, T41S, R23E SE of SE, Sec.12, T41S, R23E SW of SW, Sec. 7, T41S, R24E	5,500
F	NW of NW, Sec.13, T41S, R23E SE of SW and NW of SE, Sec.12, T41S, R23E	3,850
F-1	SE of SW and SW of SW and NW of SW, Sec.12, T41S, R23E	1,500
G	NW of NW, Sec.13, T41S, R23E/SE of NE, Sec.14, T41S, R23E	1,700
H	SE of NW and NW of SW, Sec.13, T41S, R23E	1,500
I	NE of SE and SE of SW, Sec.13, T41S, R23E	1,700
J	SW of SW, Sec.18, T41S, R24E	300

Del Bene of the USDI-BIA Branch of Environmental Quality  
were notified prior to performance of the field surveys.

## DESCRIPTION OF THE PROJECT AREA

The Phillips Oil Company, <sup>A</sup>Rutherford Unit development project is located in the extreme southeastern portion of San Juan County, just south of Montezuma Creek, Utah. The San Juan River flows to the north (2.5 miles), White Mesa Mountain is to the south, and Flat Top Mountain is situated within the project area. The <sup>A</sup>Rutherford Unit project is within the Blanding Basin of the Colorado Plateau Physiographic Province (Stokes 1977) and is characterized by broken topography ranging in elevation from 4580 feet to 6000 feet above sea level. Most of the project area is flat to rolling terrain, broken by steep-sided mesas, and dissected by intermittent washes and arroyos which feed the San Juan River. The San Juan River is the nearest permanent water source.

The surface geology is reflected in the general broken nature of the landscape. The lower flatlands are fluvial sandstones and mudstones of the Recapture Creek member of the Morrison Formation, which is generally covered by wind blown silts and sands with patches of soil and alluvium (Hintze and Stokes 1964). The lower, light-colored Bluff Sandstone Formation is exposed along Desert Creek (at the east edge of the project area) and portions of Blue Hogan Wash (Hintze and Stokes 1964). The mesas are comprised of the Westwater Canyon and Brushy Basin Members of the Morrison Formation; the later is a dinosaur-bearing, fluvial and lacustrine mudstone and siltstone (Hintze and Stokes 1964) which often contains chert deposits. The coal-bearing sandstone and carbonaceous shales of the Dakota Sandstone cap the higher mesa tops.

The vegetation is in the cool desert climates classified as the Upper Sonoran Life Zone and is characterized by a shadscale (salt desert shrub) plant community. The vegetation noted during the survey included snakeweed, rabbitbrush, shadscale, Mormon tea, big sagebrush, greasewood, saltbush, narrow-leaf yucca, prickly pear cactus, galleta grass, Indian rice grass, cheat grass, locoweed, and Russian thistle. Today, the project area supports a fairly large population of domesticated grazers: sheep, horses, and cattle. Non-domesticates noted during the survey were rabbits, rodents, lizards, and unidentified birds.

## CULTURE HISTORY

Broad overviews have been written, synthesizing the known culture history of southeastern Utah (see Nickens 1982, Weber 1982) and of northwestern New Mexico (see Stuart and Gauthier 1981). In general, the San Juan Basin, as was much of the Colorado Plateau, was inhabited prehistorically by the Basketmakers and Anasazi, relatively sedentary people who first incorporated horticulture into a hunting and gathering subsistence strategy, and later practiced agriculture. The Archaic hunter-gatherers and the earlier Paleo-Indian, mega-fauna hunters preceded the Basketmakers and Anasazi.

Historically the San Juan Basin, as was much of the Intermountain West, was inhabited by the Navajo and Ute. Although their entry into this area is as little understood as their early history, it is believed that their arrival barely preceded the Spanish Entrada during the 16th century (Wilcox 1981). From that time on, the area was visited by the Spanish, Anglo explorers, trappers, and traders, and later in the 19th century, by the Mormon settlers. Presently, much of the San Juan Basin, primarily the southern portion, is inhabited by the Navajo.

Archaeological surveys related to energy development to the east and northeast of the Rutherford Unit project (see Hewett et al 1979, Moore 1983, 1984, Swift 1984a, 1984b) have documented a variety of sites from artifact scatters to multiroom structures. Documented sites range from the Anasazi Pueblo I phase through recent Navajo. The highest site density occurs during the Anasazi Pueblo II phase, AD 900-1100. In the immediate project area, numerous isolated finds and Basketmaker II through Pueblo III and recent Navajo sites have been recorded (see Langenfeld and Hooten 1984, Langenfeld 1984).

## METHODOLOGY

A total of 13 proposed well location sites and eight access routes were inventoried, along with portions of six flow line routes (above ground pipes). A total of 9.13 miles (48,200 feet) of proposed water injection line (buried pipeline) were also inventoried (Figures 2 and 3). Tables 3 and 4 describe the area surveyed. Each of the well location sites were staked prior to the survey, demarcating the 300 by 350 foot pad site. Each well location was inspected by walking parallel transects spaced 10 meters apart back and forth until the entire location was surveyed. An additional 100 foot (30 meter) buffer zone was also inspected around the staked well pad site.

The access roads and flow line routes were flagged while the archaeologist surveyed the well sites. No access routes were surveyed for well locations that were situated on or at the edge of existing maintained roads. Flow lines are to follow proposed and existing roads and existing flow line routes. Only the portions of proposed flow line routes that paralleled proposed access roads which have yet to be built were surveyed. A 100 foot right-of-way was surveyed by walking a zig-zag pattern along each flagged access route. If a flow line was to follow the access route, an additional 25 feet were inspected in the same manner.

The injection line routes were marked by lath stakes. A 50 foot right-of-way was inspected along the staked route, using the stakes as a center line. This was accomplished by walking a zig-zag pattern down one side of the line and back along the other.

All cultural materials encountered during the survey were noted, described, and often illustrated. Those cultural resources which lacked spacial integrity and the potential for interpretable past human behavior (Plog et al 1978) were noted as isolated finds.

In addition to the field inspection, a search of the site files at the Navajo Nation Cultural Resource Management Program in Window Rock, Arizona, was initiated by phone, August 13, 1984. A records search by the Utah Division of State History found no sites to have been previously recorded within the proposed project impact areas.

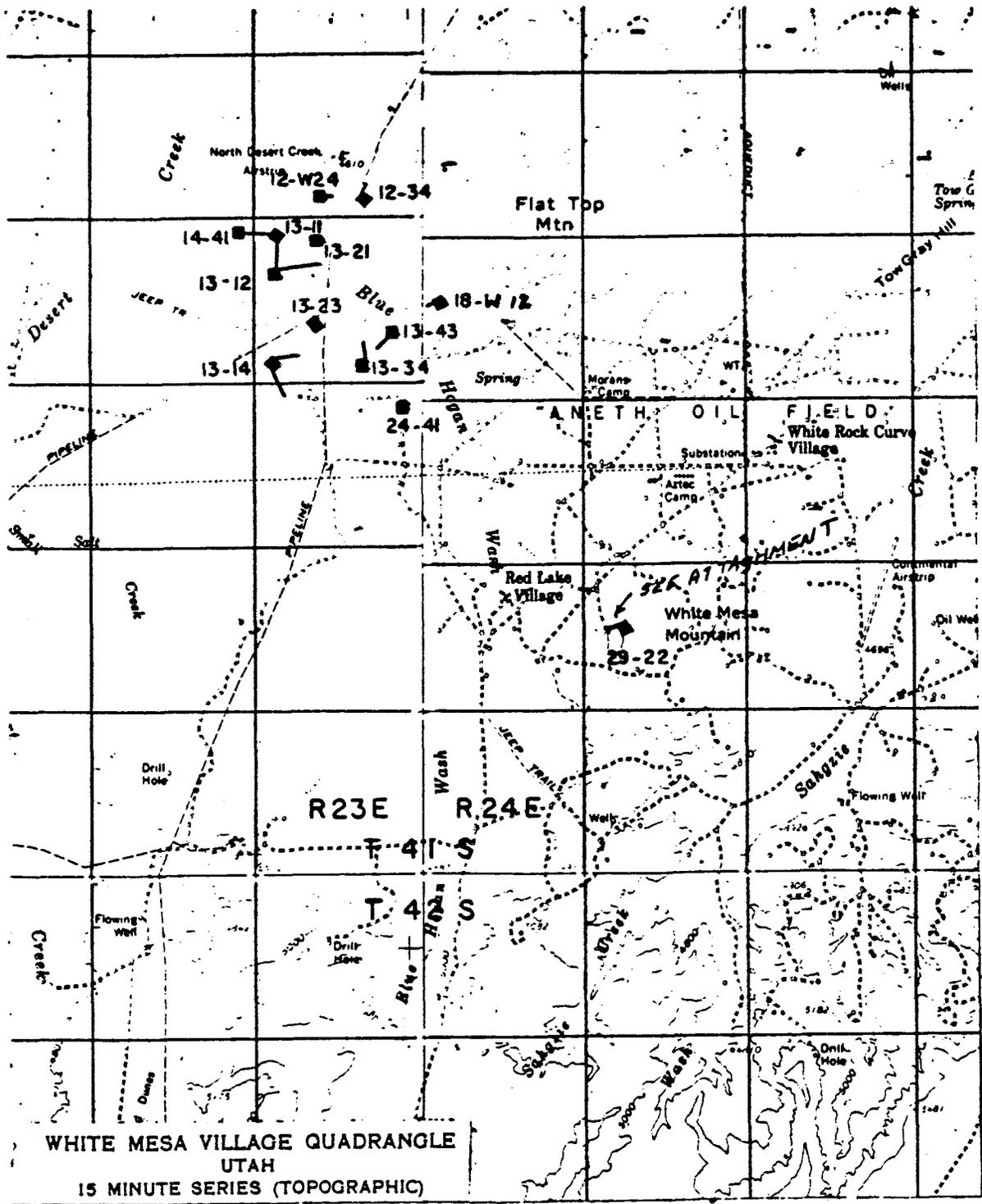


Figure 2. Locations of proposed well locations, access roads and flow line routes.

Map Scale: 1:62,500

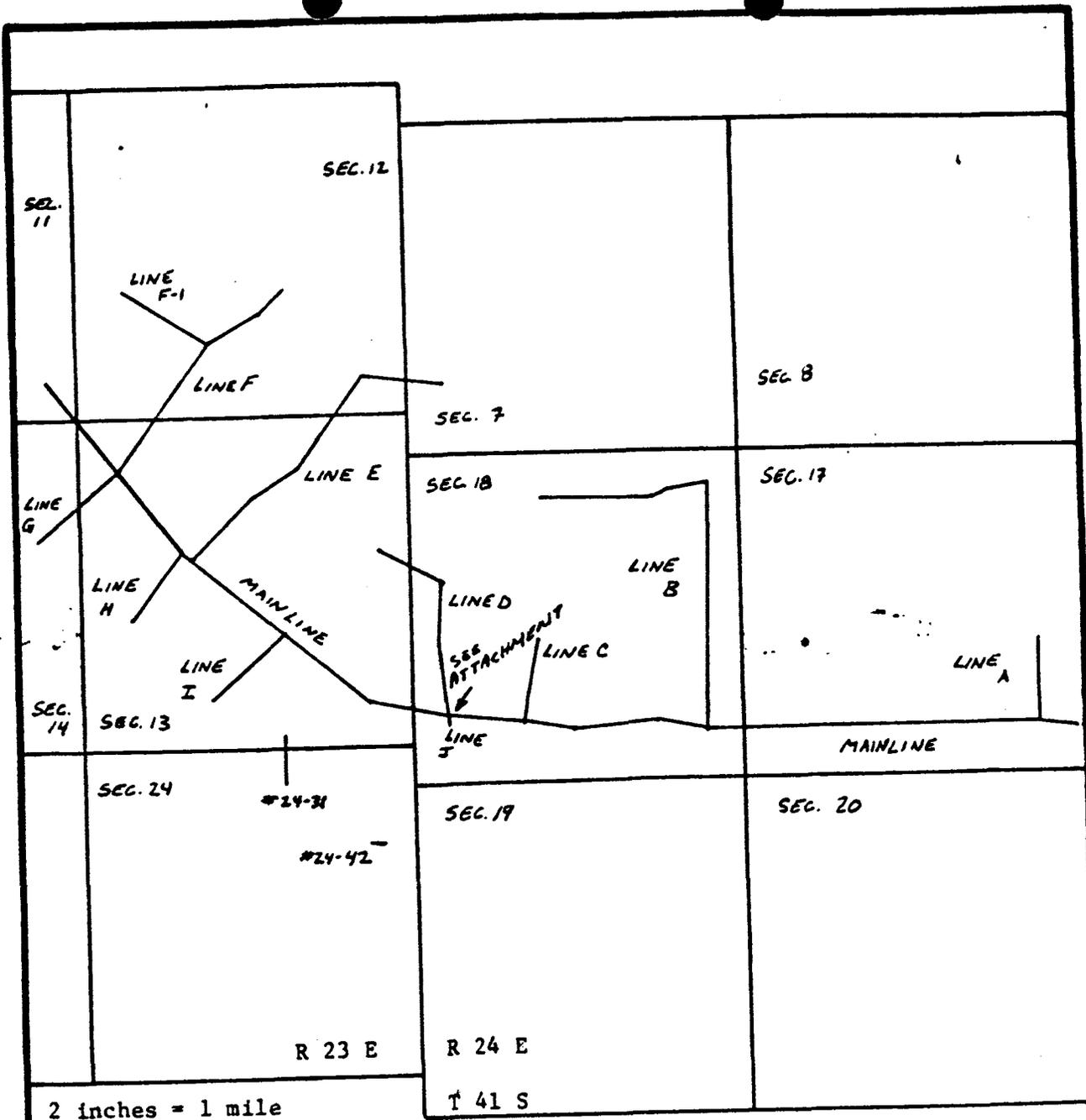


Figure 3. Location and routes of proposed water injection lines.

TABLE 3

## Description of Well Pad Project Area and Area Surveyed

Well Pad	Project Area (square feet)	Area Surveyed (square feet)
12-W24	300 ft X 350 ft = 105,000 (2.41 acres) Access route = 300 ft	400 ft X 450 ft = 180,000 (4.13 acres) 300 ft X 100 ft = 30,000 (0.69 acres)
12-34	300 ft X 350 ft = 105,000 (2.41 acres) Access & flow line = 600 ft	400 ft X 450 ft = 180,000 (4.13 acres) 600 ft X 125 ft = 75,000 (1.72 acres)
14-41	300 ft X 350 ft = 105,000 (2.41 acres) Access & flow line = 1,000 ft	400 ft X 450 ft = 180,000 (4.13 acres) 1,000 ft X 125 ft = 125,000 (2.87 acres)
13-11	300 ft X 350 ft = 105,000 (2.41 acres) Access & flow line = 800 ft	400 ft X 450 ft = 180,000 (4.13 acres) 800 ft X 125 ft = 100,000 (2.30 acres)
13-12	300 ft X 350 ft = 105,000 (2.41 acres) Access & flow line = 1,300 ft	400 ft X 450 ft = 180,000 (4.13 acres) 1,300 ft X 125 ft = 162,500 (3.73 acres)
13-14	300 ft X 350 ft = 105,000 (2.41 acres) Access route = 800 ft Flow line = 700 ft	400 ft X 450 ft = 180,000 (4.13 acres) 800 ft X 125 ft = 100,000 (2.30 acres) 700 ft X 100 ft = 70,000 (1.61 acres)
13-21	300 ft X 350 ft = 105,000 (2.41 acres) No access or flow line surveyed	400 ft X 450 ft = 180,000 (4.13 acres)
13-23	300 ft X 350 ft = 105,000 (2.41 acres) No access or flow line surveyed	400 ft X 450 = 180,000 (4.13 acres)
13-34	300 ft X 350 ft = 105,000 (2.41 acres) Access and flow line = 600 ft	400 ft X 450 ft = 180,000 (4.13 acres) 600 ft X 125 ft = 75,000 (1.72 acres)

TABLE 3, continued

Well Pad	Project Area (square feet)	Area Surveyed (square feet)
13-43	300 ft X 350 ft = 105,000 (2.41 acres)	400 ft X 450 ft = 180,000 (4.13 acres)
	Access & flow line = 600 ft	600 ft X 125 ft = 75,000 (1.72 acres)
18-W12	300 ft X 350 ft = 105,000 (2.41 acres)	400 ft X 450 ft = 180,000 (4.13 acres)
	Access & flow line = 500 ft	500 ft X 125 ft = 62,500 (1.43 acres)
24-41	300 ft X 350 ft = 105,000 (2.41 acres)	400 ft X 450 ft = 180,000 (4.13 acres)
	No access or flow line surveyed	
29-22	300 ft X 350 ft = 105,000 (2.41 acres)	400 ft X 450 ft = 180,000 (4.13 acres)
	Access & flow line = 900 ft	900 ft X 125 ft = 112,500 (2.58 acres)

Note: The figures for access route and flow line lengths are only for the portions that cross undisturbed areas. Portions that follow maintained roads or existing flow line routes were not surveyed and those figures are not provided here.

TABLE 4

## Description of Water Injection Pipeline Project Length and Area Surveyed

Line	Project Length	Area Surveyed (square feet)
Main	18,500 feet	18,500 ft X 50 ft = 925,000 (21.23 acres)
A	1,250 feet	1,250 ft X 50 ft = 62,500 ( 1.43 acres)
B	6,900 feet	6,900 ft X 50 ft = 345,000 ( 7.92 acres)
C	1,400 feet	1,400 ft X 50 ft = 70,000 ( 1.61 acres)
D	3,250 feet	3,250 ft X 50 ft = 162,500 ( 3.73 acres)
E	5,500 feet	5,500 ft X 50 ft = 275,000 ( 6.31 acres)
F	3,850 feet	3,850 ft X 50 ft = 192,500 ( 4.42 acres)
F-1	1,500 feet	1,500 ft X 50 ft = 75,000 ( 1.72 acres)
G	1,700 feet	1,700 ft X 50 ft = 85,000 ( 1.95 acres)
H	1,500 feet	1,500 ft X 50 ft = 75,000 ( 1.72 acres)
I	1,700 feet	1,700 ft X 50 ft = 85,000 ( 1.95 acres)
J	300 feet	300 ft X 50 ft = 15,000 ( 0.34 acres)
Line runs north from 24-31	750 feet	750 ft X 50 ft = 37,500 ( 0.86 acres)
Line runs east from 24-42	100 feet	Not surveyed, entirely within existing well pad location

## RESULTS

One archaeological site and 17 isolated finds were encountered during the survey. The archaeological site, a Basketmaker II to Pueblo I lithic scatter (SJC-1106) had been previously recorded by San Juan College Cultural Resources Management Program (see appendix for site description). The site had been located during the survey of a proposed access route to Phillips Oil Company's proposed well location # 18-24, and relocated during the survey of the Phillips Oil Company proposed injection line pipeline. The site was encountered at the junction of the mainline and line J (Figure 4).

SEE ATTACHMENT  
The injection line crosses through the extreme southwest portion of the site, where it has been disturbed by previous pipeline and road construction. Four pieces of lithic debitage were encountered in the pipeline right-of-way outside of the disturbed area. These artifacts appear to be surficial. Resurvey of the site area found artifact concentrations to occur in the existing roadway and bladed pipeline valve area. Approximately 20 pieces of lithic debitage, one biface, one uniface (chopper), and two unidentified Mesa Verde white ware sherds (7 mm thick with sand temper) were noted during the resurvey. Note: the projectile point fragments were not relocated. The integrity of these deposits has been greatly disturbed by blading activities. Despite the disturbed nature of the site, the potential for buried deposits remains. Also, there is good probability that the site is multicomponent due to the presence of the Archaic diagnostic and the relatively late Puebloan white ware ceramics.

Two alternatives are proposed for this 100 meter section of the pipeline: (1) to build the injection line where proposed with an archaeologist monitoring the construction activities, or (2) to reroute the mainline in order to avoid the site area. This alternative would require an archaeologist to survey the new route.

The remaining cultural materials were isolated finds. A total of 17 isolated finds were encountered during the survey. All are surficial occurrences and are described in Table 5.

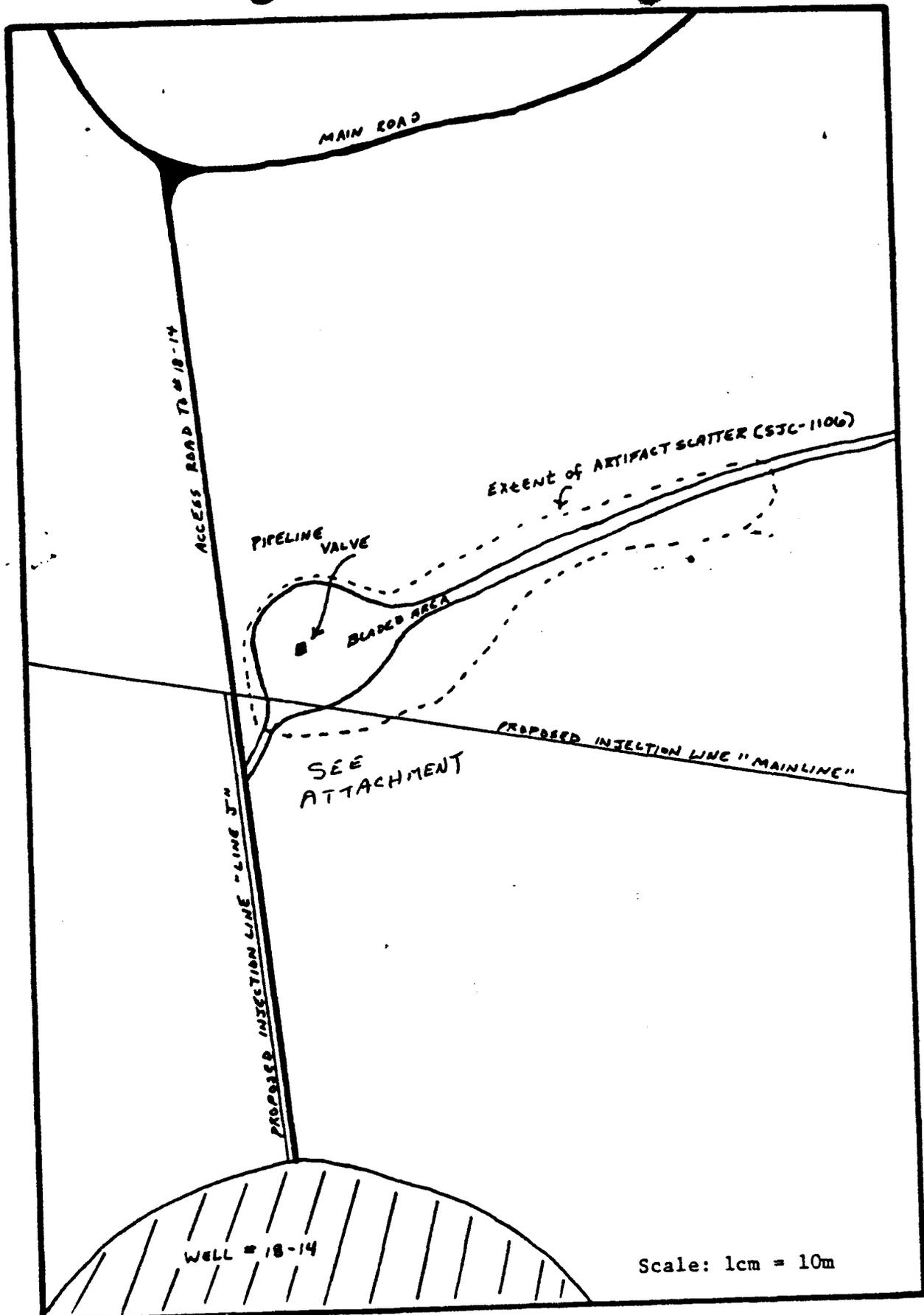


Figure 4. Map showing relationship of proposed injection line route and archaeological site - SJC-1106. Site Location: Center of E 1/2, W 1/2, SW 1/2 of Section 18, T 41 S - R 24 E, San Juan County, Utah.

TABLE 5

Isolated Finds from Phillips Oil Rutherford Unit Project  
Legal Locations and Descriptions

Number	Legal Location	Description
RU # A	CTSESW Sec.12 T41S R23E UTM: 647,000 m E 4,121,825 m N	On location 12-W24. Isolated features: semi-circular, slab feature and two slab piles; a broken cup saucer found inside--white ovenware, modern; unidentified pipe fragments, wire and sole of shoe.
RU # B	CTNENW Sec.13 T41S R23E UTM: 647,000 m E 4,121,400 m N	13-21. 3 gray-green chert, interior core reduction flakes.
RU # C	CTNWNW Sec.13 T41S R23E UTM: 646,600 m E 4,121,950 m N	13-11. Gray and red quartzite cobble tool; 3 flakes removed.
RU # D	CTNWSW Sec.13 T41S R23E UTM: 647,000 m E 4,120,600 m N	*13-23. Biface with crude, heavily weathered flake scars, material type is light and dark gray mottled chert with tan cortex.
RU # E	NWSWSE Sec.13 T41S R23E UTM: 647,690 m E 4,120,400 m N	Access road to 13-34. 4 unidentified corrugated sherds; 4 recent Pepsi bottles.
RU # F	CTSWSE Sec.13 T41S R23E UTM: 647,700 m E 4,120,200 m N	*13-43. 1 crude olive-green oolitic chert biface.
RU # G	NENENE Sec.14 T41S R23E UTM: 646,250 m E 4,121,950 m N	1 Mesa Verde white ware sherd.
RU # H	NENWNW Sec.13 T41S R23E UTM: 646,775 m E 4,121,550 m N	*Injection line 12-24 to 13-11. 1 grainy, tan to yellow chert uniface with heavily weathered, yellowish patina; flake scars are smooth.
RU # I	NWNWNE Sec.18 T41S R24E UTM: 648,950 m E 4,121,325 m N	18-21 to 18-41. 3 green quartzite interior core reduction flakes.

TABLE 5, continued

Number	Legal Location	Description
RU # J	NWSESE Sec.18 T41S R24E UTM: 649,300 m E 4,120,150 m N	18-44 to 18-34. 1 gray-tan quartzite, utilized, secondary reduction flake; 1 green quartzite secondary reduction flake.
RU # K	NESWSW Sec.18 T41S R24E UTM: 648,450 m E 4,120,175 m N	18-34 to 18-14. 1 white quartzite, tertiary reduction flake; 1 green-gray quartzite, tertiary reduction flake.
RU # L	NWSWE Sec.17 T41S R24E UTM: 650,400 m E 4,120,100 m N	17-14 to 17-44. 2 white chert, interior core reduction flakes.
RU # M	SWNWSW Sec.18 T41S R24E UTM: 648,200 m E 4,120,350 m N	18-13 to 18-14. 4 gray quartzite, secondary reduction flakes.
RU # N	NWSESE Sec.13 T41S R23E UTM: 647,700 m E 4,120,350 m N	13-33 to 13-44. 3 gray-green quartzite, interior core reduction flakes; 1 secondary reduction flake.
RU # O	SESENW Sec.13 T41S R23E UTM: 647,025 m E 4,121,000 m N	*13-22 to 13-33. 1 green chert uniface with brown patina; 1 tan quartzite, tertiary reduction flake.
RU # P	SWSESE Sec.12 T41S R23E UTM: 647,700 m E 4,121,725 m N	*13-31 to 12-44. 1 green-gray quartzite uniface.
RU # Q	NESESE Sec.13 T41S R23E UTM: 647,075 m E 4,121,100 m N	*13-22 to 13-31. 1 gray quartzite uniface with tan to brown patina.

\* illustrated isolated finds.

note: all UTM coordinates are in zone 12.

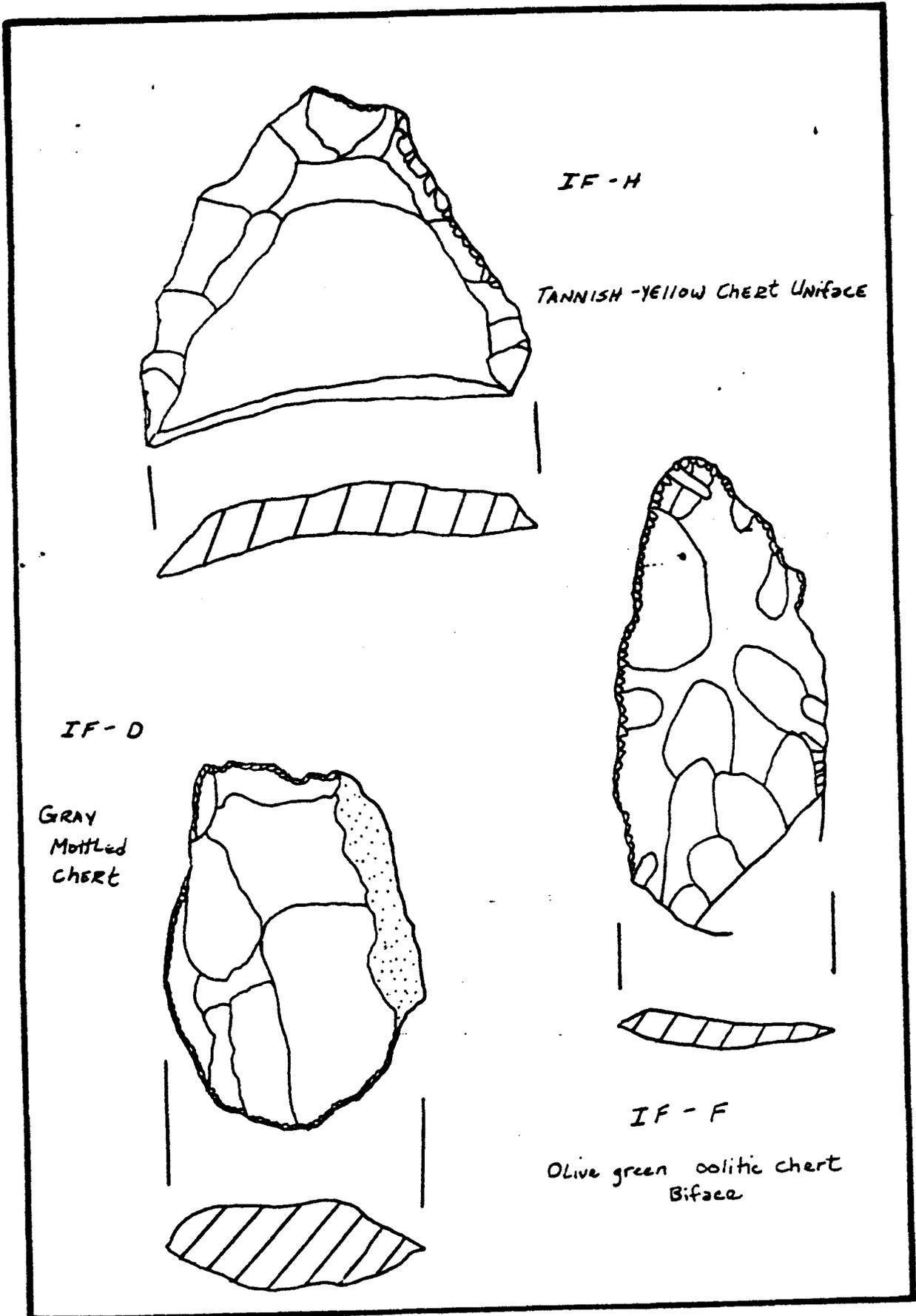


Figure 5. Flaked Stone Tools

IF #0

GREEN Chert Uniface

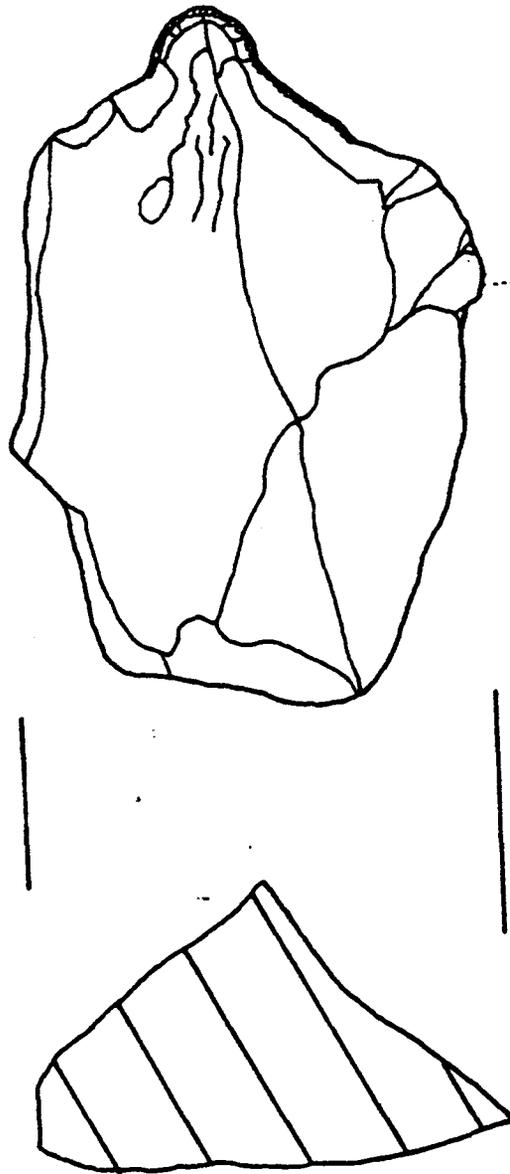


Figure 6. Flaked Stone Tool

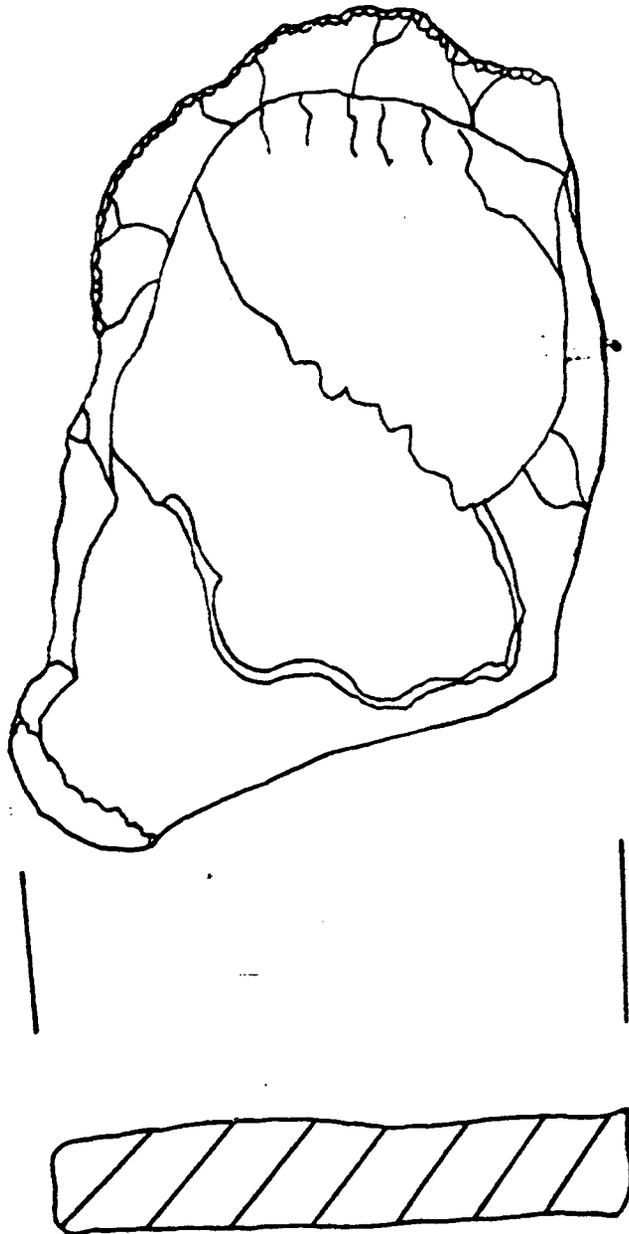
*IF - P**Greenish-gray quartzite Uniface*

Figure 7. Flaked Stone Tool

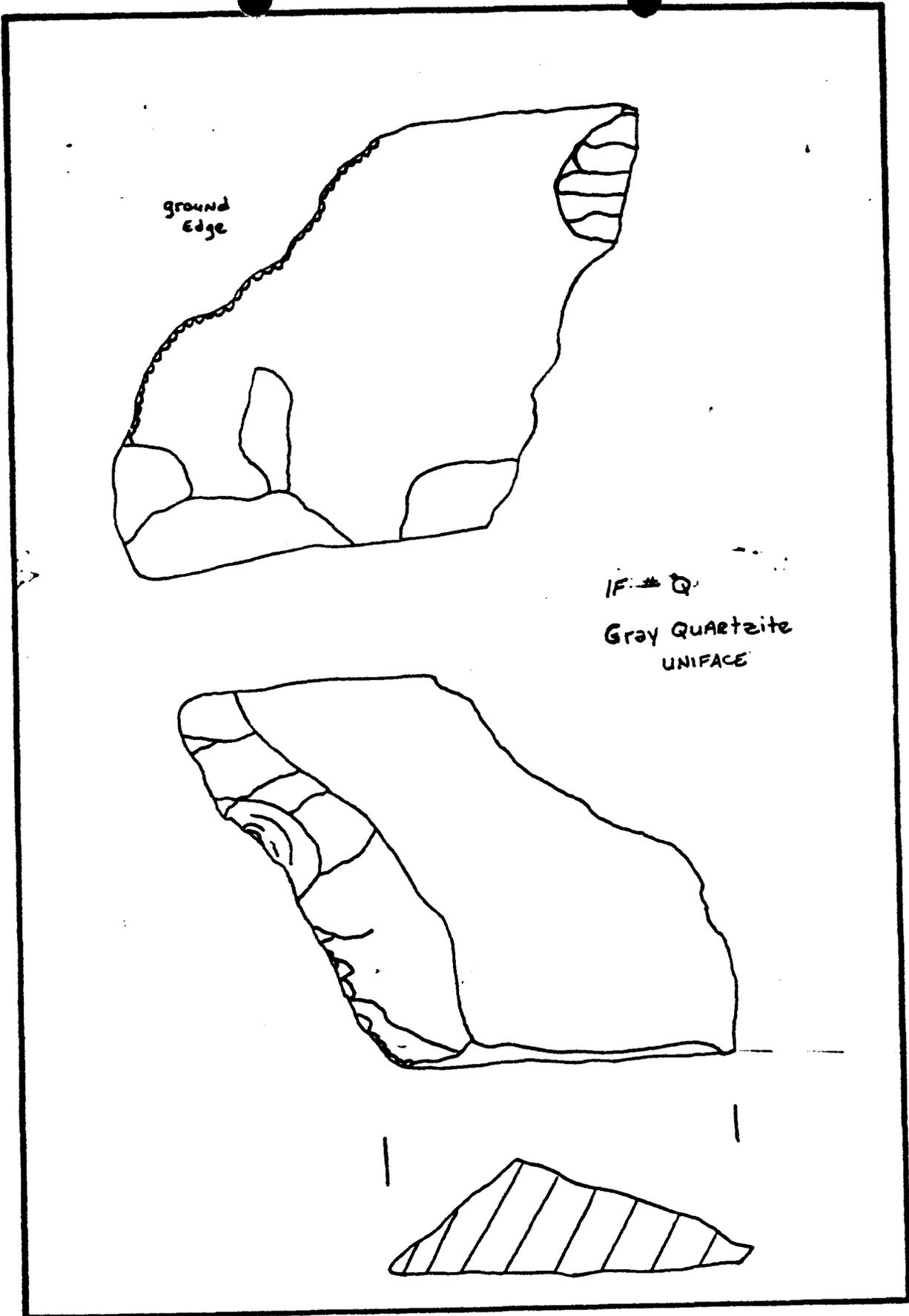


Figure 8. Flaked Stone Tool

## RECOMMENDATIONS

SEE ATTACHMENT

One potentially significant archaeological site was encountered during the survey. As outlined in section "Results", the 100 meters of injection line (the mainline) west of line J can either be constructed as planned or rerouted. If the line is positioned as proposed, an archaeologist should be present to monitor construction of the 100 meters of mainline injection pipeline, extending east from line J. In the event that buried cultural deposits are encountered, construction should stop and the BIA area archaeologist be notified. The other alternative would be to reroute a portion of the mainline in order to avoid the site. An archaeological clearance would be needed if a new route is proposed. ← New route has been surveyed  
SEE ATTACHMENT

The remaining cultural resources encountered during the survey were isolated finds which indicate prehistoric and modern use of the area. Most of these are the waste products from flint knapping activities. Several unifacial tools and one biface were also found. Recordation has exhausted the research potential of these isolated finds. Archaeological clearance is recommended for the proposed Rutherford Unit development project well locations, associated access roads and flow lines, and for the proposed injection line routes: mainline and lines A, B, C, D, E, F, F-1, G, H, I, and J, except for the 100 meter of mainline extending east from its junction with line J.

## REFERENCES CITED

- Hewett, Nancy S., Margaret A. Powers, and Meade F. Kemrer  
 1979 An Archaeological Survey and Evaluation of Cultural Resources Along the San Juan River Near Aneth, Utah. Division of Conservation Archaeology, San Juan County Archaeological Research Center and Library. Farmington, New Mexico.
- Hintze, Lehi F. and William Lee Stokes  
 1964 Geologic Map of Southeastern Utah. Williams and Heintze Map Corporation, Washington D.C.
- Langenfeld, Kristin  
 1984 Archaeological Surveys of Six Proposed Well Locations and Associated Flow Lines and Access Routes in San Juan County, Utah, -Conducted for Phillips Petroleum Company. Cultural Resources Management Program, San Juan College. Farmington, New Mexico.
- Langenfeld, Kristin and L. Jean Hooton  
 1984 Archaeological Surveys of Thirteen Proposed Well Locations and Associated Flow Lines and Access Routes in San Juan County, Utah, Conducted for Phillips Petroleum. Cultural Resources Management Program, San Juan College. Farmington, New Mexico.
- Moore, Roger A.  
 1983 An Archaeological Survey of Two Well Locations and Access Routes Near Aneth, Utah. Division of Conservation Archaeology, San Juan County Museum Association. Farmington, New Mexico.
- 1984 An Archaeological Survey of 15 Drill Locations in the White Mesa Unit South of Montezuma Creek in San Juan County, Utah. Division of Conservation Archaeology, San Juan County Museum Association. Farmington, New Mexico.
- Nickens, Paul R.  
 1982 "A Summary of the Prehistory of Southeastern Utah", IN Contributions to the Prehistory of Southeastern Utah. Assembled by Steven G. Baker. Centuries Research Inc. Utah State Office, Bureau of Land Management, Cultural Resource Series, No. 13.

Plog, Steven, Fred Plog and Walter Wait

1978 "Decision Making in Modern Surveys", IN Advances in Archaeological Method and Theory, Vol.1, edited by M.B. Schiffer, pp. 383-421. Academic Press, New York.

Stokes, William L.

1977 "Subdivision of the Major Physiographic Provinces in Utah". Utah Geology 4(1).

Stuart, David E. and Rory P. Gauthier

1981 Prehistoric New Mexico, Background for Survey. Historic Preservation Bureau, Department of Finance and Administration, State Planning Division. Santa Fe.

Swift, Marilyn

1984a An Archaeological Survey of Satellite Area A and a Pipeline Easement for Well I-12 in the White Mesa Unit, San Juan County, Utah. Division of Conservation Archaeology, San Juan County Museum Association. Farmington, New Mexico.

1984b An Archaeological Survey of Six Pipeline Easements to Wells K-20, K-22, K-24, L-23, M-18, and M-20 in Sections 7, 18, and 19, T41S, R25E, San Juan County, Utah. Division of Conservation Archaeology, San Juan County Museum Association. Farmington, New Mexico.

Weber, Kenneth R.

1980 Cultural Resource Narrative for Class I Cultural Resources Inventory for BLM Lands in South San Juan County, Utah, part 2, "History and Contemporary Cultures". Centuries Research, Inc. (Edition for draft only).

Wilcox, David R.

1981 "The Entry of Athapaskans into the American Southwest: the problem today", IN The Protohistoric Period in the North American Southwest, edited by D.R. Wilcox and W.B. Masse. Arizona State University Anthropological Research Papers, No. 24.

OPERATOR Phillips Oil Co. DATE 3-14-85  
WELL NAME Rutherford Unit #12-24  
SEC SE SW 12 T 41S R 23E COUNTY San Juan

43-037-31151  
API NUMBER

Indian  
TYPE OF LEASE

CHECK OFF:

PLAT

BOND

NEAREST WELL

LEASE

FIELD

POTASH OR OIL SHALE

PROCESSING COMMENTS:

Unit Well - on BLM - Farmington, NM  
Need water permit

APPROVAL LETTER:

SPACING:

A-3 Rutherford  
UNIT

c-3-a \_\_\_\_\_  
CAUSE NO. & DATE

c-3-b

c-3-c

STIPULATIONS:

1- Water



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

Norman H. Bangerter, Governor  
Dee C. Hansen, Executive Director  
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

March 15, 1985

Phillips Oil Company  
P. O. Box 2920  
Casper, Wyoming 82602

Gentlemen:

Re: Well No. Ratherford Unit #12-24 - SE SW Sec. 12, T. 41S, R. 23E  
775' FSL, 1980' FWL - San Juan County, Utah

Approval to drill the above referenced oil well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695 or R. J. Firth, Associate Director, (Home) 571-6068.
4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

Page 2  
Phillips Oil Company  
Well No. Ratherford Unit #12-24  
March 15, 1985

5. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31151.

Sincerely,



R. J. Firth  
Associate Director, Oil & Gas

as  
Enclosures  
cc: Branch of Fluid Minerals  
Bureau of Indian Affairs

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REQUESTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

AUG 26 1985

1. oil well  gas well  other

2. NAME OF OPERATOR  
Phillips Petroleum Company **DIVISION OF OIL GAS & MINING**

3. ADDRESS OF OPERATOR  
8055 E. Tufts Ave., Denver, CO 80237

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 775' FSL, 1980' FWL (SE/SW)  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>		<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>		<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>		<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>		<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>		<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>		<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>		<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>		<input type="checkbox"/>

(other)

5. LEASE  
14-20-603-246-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Navajo

7. UNIT AGREEMENT NAME  
SW-I-4192

8. FARM OR LEASE NAME  
Ratherford Unit

9. WELL NO.  
#12-24

10. FIELD OR WILDCAT NAME  
Greater Aneth

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 12, T41S, R23E

12. COUNTY OR PARISH | 13. STATE  
San Juan | Utah

14. API NO.  
43-037-31151

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
4592' unq. GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Drilled 18" conductor hole to 110' G.L. on 5-30-85. Ran 109' 13-3/8" K-55 54.5# BT&C casing. Set at 109.6', cemented with 177 cu.ft. (150 sx) Class B cement to surface. Finished job and moved out rat hole driller 5-30-85.

Spudded well 8-10-85 with Four Corners Drilling Rig #9. Drilled 12-1/4" hole to 1595'. Ran 9-5/8" 36# K-55 LT&C casing, set at 1595'. Cemented with 956 cu.ft. (395 sx) Howco Lite cement; tailed with 354 cu.ft. (300 sx) Class B cement. Circulated to surface, fell back; pumped 65 sx Class B as top job. Job complete 8-12-83.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Paul A. Burk TITLE Drilling Manager DATE August 21, 1985

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

6-BLM, Farmington, NM  
2-Utah O&GCC, SLC  
1-Casper  
1-File (RC)  
1-J. Weichbrodt

1-Chevron USA, Inc.  
1-Mobil Oil Corp.  
1-Texaco, Inc.  
\*See Instructions on Reverse Side  
1-Shell Oil Co.

2  
14

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS **RENEWALS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other  **SEP 03 1985**

2. NAME OF OPERATOR  
Phillips Petroleum Company **DIVISION OF OIL GAS & MINING**

3. ADDRESS OF OPERATOR  
8055 E. Tufts Ave. Pkwy., Denver, CO 80237

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 775' FSL, 1980' FWL (SE/SW)  
AT TOP PROD. INTERVAL:  
AT TOTAL DEPTH:

5. LEASE  
14-20-603-246-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Navajo

7. UNIT AGREEMENT NAME  
SW-I-4192

8. FARM OR LEASE NAME  
Ratherford Unit

9. WELL NO.  
#12-24

10. FIELD OR WILDCAT NAME  
Greater Aneth

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
Sec. 12, T41S, R23E

12. COUNTY OR PARISH | 13. STATE  
San Juan | Utah

14. API NO.  
43-037-31151

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
4592' ung. GL

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	<input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	<input type="checkbox"/>
(other)	<input type="checkbox"/>	<input type="checkbox"/>

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Drilled 8-3/4" hole to 5470'. Ran 5457' 7" 23# and 26#, K-55 and N-80, ST&C and BT&C casing; set at 5469'. Cemented with 1122 cu.ft. (550 sx) Class B Light; tailed with 360 cu.ft. (300 sx) Class B w/18% salt. Pressure tested casing to 2000 psi. Job complete 8-24-85. Plug back total depth 5447'.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Richard C. Burk TITLE Drilling Manager DATE August 28, 1985

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

- 6-BLM, Farmington, NM
- 2-Utah O&GCC, SCL
- 1-Casper
- 1-Well File (RC)
- 1-J. Weichbrodt

- 1-Chevron USA, Inc.
- 1-Texaco, Inc.
- 1-Mobil Oil Corp
- \*See Instructions on Reverse Side
- 1-Texaco, Inc.



**PHILLIPS PETROLEUM COMPANY**

DENVER, COLORADO 80237-2898  
8055 EAST TUFTS AVENUE PARKWAY, PHONE: 303 850-3000

RECEIVED

OCT 09 1985

DIVISION OF OIL  
GAS & MINING

October 3, 1985

RE: Ratherford Unit Well No. 12-24  
San Juan County, Utah  
UFS: E16-4(6)A(6)

Working Interest Owners

Attached are corrected copies of the open hole logs for Ratherford Unit Well No. 12-24. Initially, the location was incorrectly given as 675' FSL and 1905' FEL, Section 12-T41S-R23E. Correct location is 775' FSL and 1980' FEL, Section 12-T41S-R23E.

*Johannes Aasheim*

Johannes Aasheim  
Phillips Petroleum Company

JA/ms RUUW.1085

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

(Indicate location on reverse side)

Form approved.  
Budget Bureau No. 1004-0137  
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-246-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

SW-I-4192

8. FARM OR LEASE NAME

Ratherford Unit

9. WELL NO.

12-24

10. FIELD AND POOL, OR WILDCAT

Greater Aneth

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 12-T41S-R23E

12. COUNTY OR PARISH  
San Juan

13. STATE  
Utah

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

1b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. REVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR  
Phillips Petroleum Company

3. ADDRESS OF OPERATOR  
P. O. Box 2920, Casper, Wyoming 82602

4. LOCATION OF WELL (Report location clearly and in accordance with instructions on reverse side)  
At surface 775' FSL & 1980' FWL, SE SW  
At top prod. interval reported below  
At total depth

RECEIVED  
OCT 17 1985

14. PERMIT NO. DATE ISSUED  
-- DIVISION 3-15-85  
GAS & MINING

15. DATE SPUDDED 8/10/85 16. DATE T.D. REACHED 8/23/85 17. DATE COMPL. (Ready to prod.) 9/12/85 18. ELEVATIONS (DF, RKB, RT, OR, ETC.)\* GR 4599', RKB 4611' 19. ELEV. CASINGHEAD --

20. TOTAL DEPTH, MD & TVD 5470' 21. PLUG, BACK T.D., MD & TVD 5435' 22. IF MULTIPLE COMPL., HOW MANY? -- 23. INTERVALS DRILLED BY -- 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* 5366' - 5421' Desert Creek Zone I 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN  
CDL-DSN-GR-Caliper, Dual Guard Force, Contact Caliper, CBL  
27. WAS WELL CORRED No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	54.5#	110'	17-1/2"	177 cu.ft. Class "B"	--
9-5/8"	36#	1595'	12-1/4"	1310 cu.ft. Class "B"	--
7"	23# & 26#	5469'	8-3/4"	1482 cu.ft. Class "B"	--

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
--	--	--	--	--	2-7/8"	5225'	--

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
INTERVAL	CHARGES	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5411-5421, 2 SPF, 4" HSC Gun,	20 shots	5366-5421' -	Acidized each ft of perms w/50 gal 28% HCL. Acidized 2nd stage w/4600 gal 28% HCL w/2 gal/1000 F-801 fines suspender, 3 gal/1000 W-802 non-emulsifier, (CONT ON BACK)
5366-5402, 2 SPF, 4" HSC Gun,	72 shots 23 gram charges		

33.* PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
9/12/85		Pumping 1-1/4"				Producing	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9/28/85	24	--	→	25	10	0	400
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
--	--	→	25	10	0	40.0	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)  
Sold  
TEST WITNESSED BY --

35. LIST OF ATTACHMENTS  
None

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED D. C. Gill TITLE Area Manager DATE October 15, 1985

\*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH
NO. 32 - ACID JOB Continued -							
1 gal/1000 A-250 corrosion inhibitor and 6 gal/1000 U-42 iron agent. Total 6900 gal 28% HCL Acid. Used 130 ball sealers. Displaced w/40 bbl lease wtr.				LOG TOPS			
				Shinarump	2130		
				DeChelly	2472		
				Hermosa	4350		
				Ismay	5190		
				Desert Creek Zone I	5358		

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH

Distribution:

- 4 - BLM, Farmington, NM
- 1 - Utah O&G CC, Salt Lake City, UT
- 1 - The Navajo Nation, Window Rock, AZ
- 1 - R. Ewing, B'Ville
- 1 - L. R. Williamson r) G. W. Berk, Denver
- 1 - T. L. Carten r) P. Bertuzzi, Denver
- 1 - D. L. Kennedy, Denver
- 1 - J. B. Lindemood, Denver
- 16 - W. I. Owners
- 1 - J. Weichbrodt, Cortez
- 1 - File RC

# Mobil Oil Corporation

P.O. BOX 5444  
DENVER, COLORADO 80217-5444

May 14, 1986

Utah Board of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

Attn: R. J. Firth  
Associate Director

RECEIVED  
MAY 16 1986

DIVISION OF  
OIL, GAS & MINING

## SUPERIOR OIL COMPANY MERGER

Dear Mr. Firth:

On September 20, 1984, The Superior Oil Company (Superior) became a wholly owned subsidiary of Mobil Corporation. Since January 1, 1985, Mobil Oil Corporation (MOC), another wholly owned subsidiary of Mobil Corporation, has acted as agent for Superior and has operated the Superior-owned properties.

On April 24, 1986, Superior was merged with Mobil Exploration and Producing North America Inc. (MEPNA), which is also a wholly owned subsidiary of Mobil Corporation. MEPNA is the surviving company of the merger.

This letter is to advise you that all properties held in the name of Superior will now be held in the name of MEPNA; and that these properties will continue to be operated by MOC as agent for MEPNA.

Attached is a listing of all wells and a separate listing of injection-disposal wells, Designation of Agent and an organization chart illustrating the relationships of the various companies. If you have any questions or require additional documentation of this merger, please feel free to contact me at the above address or (303) 298-2577.

Very truly yours,



R. D. Baker  
Environmental Regulatory Manager

CNE/rd  
CNE8661



LOCATION: SESW S 12 -T41S-R23 E  
FIELD: GREATER ANETH  
RESERVOIR: Desert Creek Zone I

WI COMPLETION: Injector  
PRESENT STATUS: Conversion

RKB 4611  
GL 4599

110'

SURFACE CASING: 13 3/8" 54.5#

Well #: 12W24

INTERMEDIATE CASING: 9 5/8" 36#

1595'

PRODUCTION CASING: 7" 26# / 23#

PERFORATIONS: \_\_\_\_\_  
5411-5421'  
5366-5402'  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PACKER: Baker Model AB  
Tension Type or Similar Act.  
at 5296'

Logs on file: \_\_\_\_\_  
Gamma Ray  
Density Porosity  
Neutron Porosity  
Electrical Resistivity  
Caliper  
Microlog  
\_\_\_\_\_

PBTD: 5435'  
OTD: 5470'

5469'

APPLICATION FOR INJECTION WELL

Operator: Phillips Petroleum Company Telephone: (307)237-3791

Address: P. O. Box 2920

City: Casper State: Wyoming Zip: 82602

Well no.: 12W24 Field or Unit name: Ratherford Unit

Sec.: 12 Twp.: 41S Rng.: 23E County: San Juan Lease no. 14-20-603-246-A

	<u>YES</u>	<u>NO</u>
Is this application for expansion of an existing project?.....	<u>X</u>	<u>      </u>
Will the proposed well be used for: Enhanced recovery?.....	<u>X</u>	<u>      </u>
Disposal?.....	<u>      </u>	<u>X</u>
Storage?.....	<u>      </u>	<u>X</u>
Is this application for a new well to be drilled?.....	<u>      </u>	<u>X</u>
Has a casing test been performed for an existing well?.....	<u>      </u>	<u>X</u>

(If yes, date of test: \_\_\_\_\_)

Injection interval: from 5366 to 5421

Maximum injection: rate 500 BHPD pressure 3000 psig

Injection zone contains X oil, X gas or \_\_\_\_\_ fresh water within 1/2 mile.

Additional information as required by Rule 502 should accompany this form.

I hereby certify that the foregoing is true and correct to the best of my knowledge:

Signed: D.C. Gill Title: Area Manager Date: 8/13/86  
D.C. Gill

(This space for DOGM approval)

Approved by: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

LOCATION: SESU Sector - T415-R23 E  
FIELD: GREATER ANETH  
RESERVOIR: Desert Creek Zone I

WELL COMPLETION: Injector  
PRESENT STATUS: Conversion

RKB 4611  
GL 4599 110'

SURFACE CASING: 1 3/8" 54.5#

Well #: 12W24

INTERMEDIATE CASING: 9 5/8" 36#

1595'

PRODUCTION CASING: 7" 26# / 23#

PERFORATIONS: \_\_\_\_\_  
5411-5421'  
\_\_\_\_\_  
5366-5402'  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PACKER: Baker Model AB  
Tension Type or Similar Act  
at 5296'

Logs on file: \_\_\_\_\_  
Gamma Ray  
Density Porosity  
Neutron Porosity  
Electrical / Resistivity  
Caliper  
Microlog  
\_\_\_\_\_

PBTD: 5435'  
OTD: 5470'

5469'

Publication was sent to the following:

Phillips Petroleum Company  
Box 2920  
Casper, Wyoming 82602

San Juan Record  
PO Box 879  
937 East Highway 666  
Monticello, Utah 84535

Newspaper Agency  
Legal Advertising  
Mezzanine Floor  
143 South Main  
Salt Lake City, Utah 84110

Utah State Department of Health  
Water Pollution Control  
Attn: Loren Morton  
4241 State Office Building  
Salt Lake City, Utah 84114

U.S. Environmental Protection Agency  
Suite 1300  
Attn: Mike Strieby  
999 18th Street  
Denver, Colorado 80202-2413

Bureau of Land Management  
Consolidated Financial Center  
324 South State Street  
Salt Lake City, Utah 84111-2303

Bureau of Land Management  
Fluid Minerals Caller Service #4104  
Farmington, New Mexico 87499

Navajo Tribe  
Department of Water Management  
PO Box 308  
Window Rock Arizona 86515  
Attn: Masued Uz Zaman

Mobil Oil Corporation  
PO Box 5444  
Denver, Colorado 80217

Texaco, Inc.  
PO Box 3360  
Casper, Wyoming 82602  
Attn: A.J. Sanford

*Sept. 11, 1986*  
*Marlayne Poulsen*

Operator

Phillips Petroleum

Well

12-24

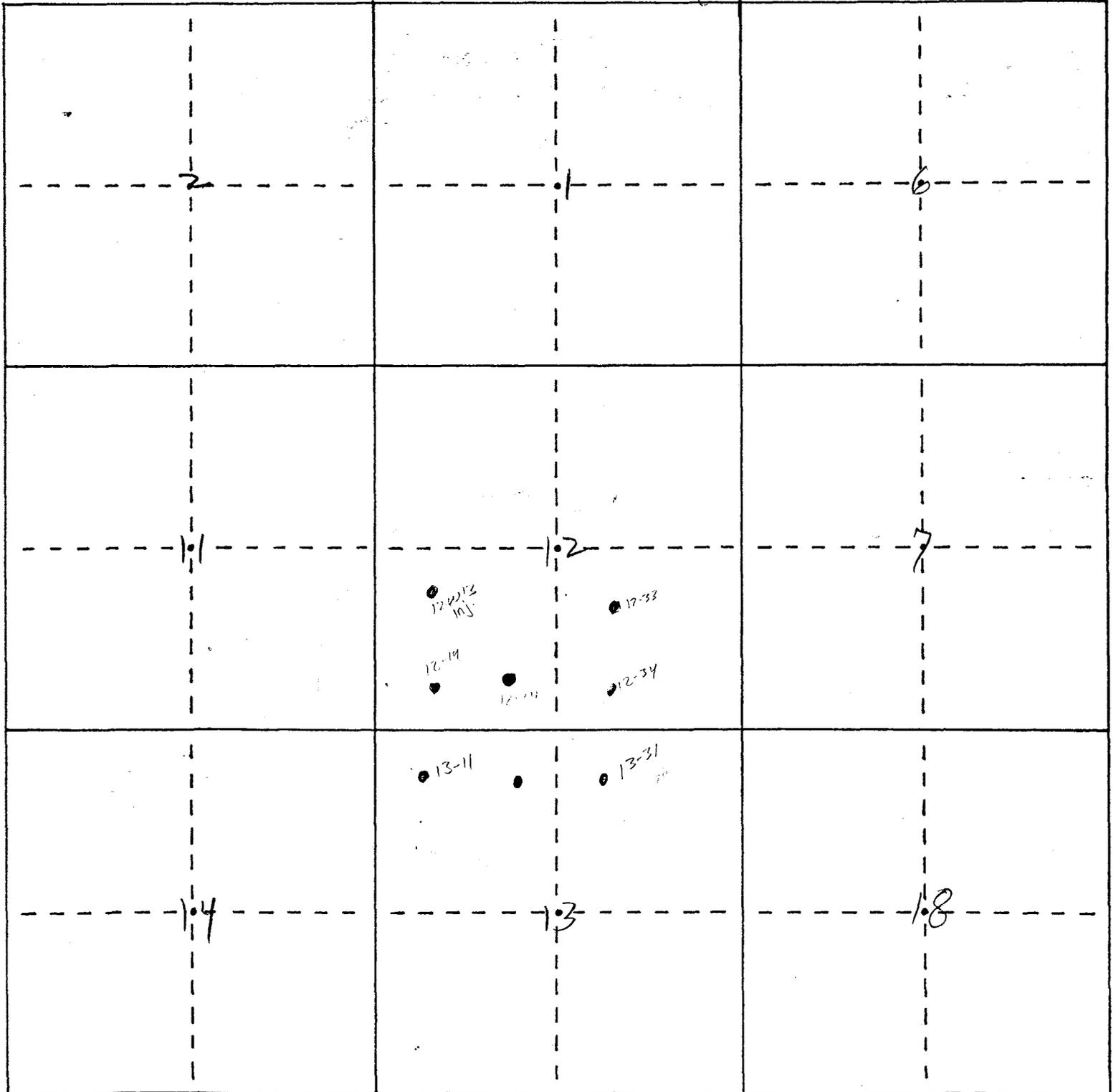
Location

sec 12, 41S 23E

SAN JUAN COUNTY Utah

Prop. 6  
1 in. scale

23 | 24



BEFORE THE DIVISION OF OIL, GAS AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF UTAH

---00000---

IN THE MATTER OF THE APPLICATION :  
OF PHILLIPS PETROLEUM COMPANY, :  
FOR ADMINISTRATIVE APPROVAL TO :  
INJECT FLUID INTO WELLS TO BE :  
CONVERTED TO ENHANCED RECOVERY :  
INJECTION WELLS LOCATED IN :  
SECTIONS 11, 12, AND 13, TOWN- :  
SHIP 41 SOUTH, RANGE 23 EAST; AND :  
SECTIONS 8, 17 AND 18, TOWNSHIP :  
41 SOUTH, RANGE 24 EAST, S.L.M., :  
SAN JUAN COUNTY, UTAH :

CAUSE NO. UIC-087

---00000---

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED  
MATTER.

Notice is hereby given that Phillips Petroleum Company, Box 2920,  
Casper, Wyoming 82602, has requested administrative approval from the  
Division to convert the following listed wells to enhanced recovery  
water injection wells:

RATHERFORD UNIT - San Juan County, Utah

#11W42, Sec. 11, T41S, R23E	#13W22, Sec. 13, T41S, R23E
#12W11, Sec. 12, T41S, R23E	#13W33, Sec. 13, T41S, R23E
#12W24, Sec. 12, T41S, R23E	# 8W34, Sec. 8, T41S, R24E
#12W33, Sec. 12, T41S, R23E	#17W32, Sec. 17, T41S, R24E
#13W11, Sec. 13, T41S, R23E	#18W12, Sec. 18, T41S, R24E
#13W13, Sec. 13, T41S, R23E	

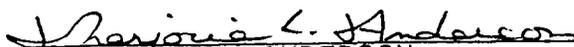
The proposed operating data for the wells is as follows:

INJECTION INTERVAL: Paradox Formation 5303' - 5548'  
MAXIMUM ESTIMATED SURFACE PRESSURE: 3000 psig  
MAXIMUM ESTIMATED WATER INJECTION RATE: 500 BWPD

Approval of this Application will be granted unless any objections  
are filed with the Division of Oil, Gas and Mining within fifteen days  
after publication of this Notice. Objections should be mailed to the  
Division of Oil, Gas and Mining, Attention: UIC Program Manager, 355  
West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah  
84180-1203.

DATED this 8th day of September, 1986.

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

  
MARJORIE L. ANDERSON  
Administrative Assistant



**PHILLIPS PETROLEUM COMPANY**

CASPER, WYOMING 82602  
BOX 2920, Casper, Wyoming 82602

EXPLORATION AND PRODUCTION GROUP

August 14, 1986

Navajo Tribe  
Department of Water Management  
P. O. Box 308  
Window Rock, AZ 86515

Attn: Masued Uz Zaman

Re: Ratherford Unit  
Injection Well Conversions

Dear Sirs,

Phillips Petroleum Company has made application to the State of Utah, Division of Oil, Gas and Mining to convert eleven existing producing wells to water injection wells in the Ratherford Unit secondary recovery project. The revised rule 502(b)(12) requires that you are notified of these plans and are provided with a copy of the application for injection well (Form DOGM-UIC-1). Under Rule 503 you are provided with the opportunity to object to the proposed application.

"Applications for Injection Well" are attached for the following existing wells:

	12W11	13W11	13W33
8W34	12W24	13W13	17W32
11W42	12W33	13W22	18W12

Please contact Renee Taylor or Blair Murphy at (307) 237-3791 with any questions.

Sincerely,  
Original Signed By:  
D. C. GILL

D. C. Gill  
Area Manager

RCT/fb (17)

cc: B. J. Murphy-Casper  
J. R. Reno-Cortez  
St. of Utah OG&M/UIC  
Casper-RC



**PHILLIPS PETROLEUM COMPANY**

CASPER, WYOMING 82602

BOX 2920

P.O. Box 2920, Casper, Wyoming 82602

EXPLORATION AND PRODUCTION GROUP

August 14, 1986

Mobil Oil Corp.  
P.O. Box 5444  
Denver, CO 80217  
Attn: Joint Interest Advisor

Re: Ratherford Unit  
Injection Well Conversions

Dear Sirs,

Phillips Petroleum Company has made application to the State of Utah, Division of Oil, Gas and Mining to convert eleven existing producing wells to water injection wells in the Ratherford Unit secondary recovery project. The revised rule 502(b)(12) requires that you are notified of these plans and are provided with a copy of the application for injection well (Form DOGM-UIC-1). Under Rule 503 you are provided with the opportunity to object to the proposed application.

"Applications for Injection Well" are attached for the following existing wells:

	12W11	13W11	13W33
8W34	12W24	13W13	17W32
11W42	12W33	13W22	18W12

Please contact Renee Taylor or Blair Murphy at (307) 237-3791 with any questions.

Sincerely,

Original Signed By:

D. C. GILL

D. C. Gill  
Area Manager

RCT/fb (17)

cc: B. J. Murphy-Casper  
J. R. Reno-Cortez  
St. of Utah OG&M/UIC  
Casper-RC



**PHILLIPS PETROLEUM COMPANY**

CASPER, WYOMING 82602  
BOX 2920 BOX 2920, Casper, Wyoming 82602

EXPLORATION AND PRODUCTION GROUP

August 14, 1986

Texaco, Inc.  
P.O. Box 3360  
Casper, WY 82602  
Attn: A. J. Sanford

Re: Ratherford Unit  
Injection Well Conversions

Dear Sirs,

Phillips Petroleum Company has made application to the State of Utah, Division of Oil, Gas and Mining to convert eleven existing producing wells to water injection wells in the Ratherford Unit secondary recovery project. The revised rule 502(b)(12) requires that you are notified of these plans and are provided with a copy of the application for injection well (Form DOGM-UIC-1). Under Rule 503 you are provided with the opportunity to object to the proposed application.

"Applications for Injection Well" are attached for the following existing wells:

	12W11	13W11	13W33
8W34	12W24	13W13	17W32
11W42	12W33	13W22	18W12

Please contact Renee Taylor or Blair Murphy at (307) 237-3791 with any questions.

Sincerely,

Original Signed By:  
D. C. GILL

D. C. Gill  
Area Manager

RCT/fb (17)

cc: B. J. Murphy-Casper  
J. R. Reno-Cortez  
St. of Utah OG&M/UIC  
Casper-RC



**PHILLIPS PETROLEUM COMPANY**

CASPER, WYOMING 82602  
BOX 2920

EXPLORATION AND PRODUCTION GROUP

August 14, 1986

**RECEIVED**  
AUG 15 1986

State of Utah  
Division of Oil, Gas, and Mining  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

**DIVISION OF  
OIL, GAS & MINING**

Attn: Gil Hunt

RE: Ratherford Unit  
San Juan County  
Class II Injection Well  
Conversions

Dear Mr. Hunt:

Enclosed are applications of conversions for the last eleven wells in the Ratherford Unit Conversion Program. The well numbers are:

	12-W11	13-W11	13-W33
8W34	12-W24	13-W13	17-W32
11W42	12-W33	13-W22	18-W12

We have listed, on each well bore schematic, the logs on file for that well. We have also enclosed a copy of our letters to mineral lease operators and landowners in the area informing them of these proposed well conversions. Please refer to the attachment package of February and June 1986 for other required information. Please contact Renee Taylor at (307) 237-3791 with any questions.

Thank you for your help in making this conversion program run smoothly.

Sincerely,

PHILLIPS PETROLEUM COMPANY

D. C. Gill  
Area Manager

RCT/fb (23)

Attach

cc: B. J. Murphy - Casper w/o attach  
J. R. Reno - Cortez w/attach.  
Casper RC

UIC CHECKLIST FOR APPLICATION APPROVAL

OPERATOR Phillips Petroleum WELL NUMBER 12-24  
 SEC. 12 T. 415 R. 23E COUNTY SAN JUAN  
 API # 42-037-31151

NEW WELL  DISPOSAL WELL  ENHANCED RECOVERY WELL

- Plat showing surface ownership Yes  No
- Application forms complete Yes  No
- Schematic of well bore Yes  No
- Adequate geologic information Yes  No
- Rate and Pressure information Yes  No
- Fluid source Yes  No
- Analysis of formation fluid Yes  No
- Analysis of injection fluid Yes  No
- USDW information Yes  No
- Mechanical integrity test Yes  No  will be done

Comments: Producing wells 6, 2, 1 injection well  
~~1. P.A. L.A.~~

13<sup>3</sup>/<sub>8</sub> surface casing 110' cmt to surface.  
intermediate 9<sup>5</sup>/<sub>8</sub>" C1595 cmt to surface  
7" Production C 5469' / 1482 cu/ft. of cmt.

Reviewed by D. James 8/20/86



STATE OF UTAH  
 NATURAL RESOURCES  
 Oil, Gas & Mining

Norman H. Bangarter, Governor  
 Dee C. Hansen, Executive Director  
 Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

September 11, 1986

San Juan Record  
 P.O. Box 879  
 937 East Highway 666  
 Monticello, Utah 84535

Gentlemen:

RE: Cause No. UIC-087

Enclosed is a Notice of Application of Administrative Approval before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible, but no later than the 24th day of September, 1986. In the event that said notice cannot be published by this date, please notify me immediately by calling 538-5340.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Sincerely,

*Marjorie L. Anderson*  
 for  
 Marjorie L. Anderson  
 Administrative Assistant

mfp

Enclosure



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

Norman H. Bangerter, Governor  
Dee C. Hansen, Executive Director  
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

September 11, 1986

Newspaper Agency Corporation  
Legal Advertising  
143 South Main - Mezzanine Floor  
Salt Lake City, Utah 84110

Gentlemen:

RE: Cause No. UIC-087

Enclosed is a Notice of Application of Administrative Approval before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible, but no later than the 24th day of September, 1986. In the event that said notice cannot be published by this date, please notify me immediately by calling 538-5340.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Sincerely,

*Marjorie L. Anderson*  
for  
Marjorie L. Anderson  
Administrative Assistant

mfp

Enclosure



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

101703

Norman H. Bangerter, Governor  
Dee C. Hansen, Executive Director  
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

October 9, 1986

Phillips Petroleum Company  
P.O. Box 2920  
Casper, Wyoming 82602

Gentlemen:

RE: Injection Well Approval - Cause No. UIC-087

Insofar as this Division is concerned, administrative approval is hereby granted to convert the following wells to Class II enhanced recovery water injection wells:

RATHERFORD UNIT - San Juan County, Utah

#11W42, Sec. 11, T41S, R23E	#13W22, Sec. 13, T41S, R23E
#12W11, Sec. 12, T41S, R23E	#13W33, Sec. 13, T41S, R23E
#12W24, Sec. 12, T41S, R23E	# 8W34, Sec. 8, T41S, R24E
#12W33, Sec. 12, T41S, R23E	#17W32, Sec. 17, T41S, R24E
#13W11, Sec. 13, T41S, R23E	#18W12, Sec. 18, T41S, R24E
#13W13, Sec. 13, T41S, R23S	

This approval is conditional upon full compliance with the UIC rules and regulations adopted by the Board of Oil, Gas and Mining, and construction and operation of the wells as outlined in the application submitted.

If you have any questions concerning this matter, please do not hesitate to call or write.

Best regards,

Dianne R. Nielson  
Director

mfp  
7627U

Affidavit of Publication

RECEIVED OCT 01 1986 ADM-338

STATE OF UTAH,
County of Salt Lake

ss.

DIVISION OF OIL, GAS & MINING

CHRIS. ANDERSON

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
CAUSE NO. UIC-087
IN THE MATTER OF THE APPLICATION OF PHILLIPS PETROLEUM COMPANY, FOR THE ADMINISTRATIVE APPROVAL TO INJECT FLUID INTO WELLS TO BE CONVERTED TO ENHANCED RECOVERY INJECTION WELLS LOCATED IN SECTIONS 11, 12, AND 13, TOWNSHIP 41 SOUTH, RANGE 23 EAST; AND SECTIONS 8, 17 AND 18, TOWNSHIP 41 SOUTH, RANGE 24 EAST, S.L.M., SAN JUAN COUNTY, UTAH.
THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.
Notice is hereby given that Phillips Petroleum Company, Box 2920, Casper, Wyoming 82602, has requested administrative approval from the Division to convert the following listed wells to enhanced recovery water injection wells:
RATHERFORD UNIT - San Juan County, Utah
# 11W42, Sec. 11, T41S, R23E # 13W22, Sec. 13, T41S, R23E
# 12W11, Sec. 12, T41S, R23E # 13W33, Sec. 13, T41S, R23E
# 12W24, Sec. 12, T41S, R23E # 8W34, Sec. 8, T41S, R24E
# 12W33, Sec. 12, T41S, R23E # 17W32, Sec. 17, T41S, R24E
# 13W11, Sec. 13, T41S, R23E # 18W12, Sec. 18, T41S, R24E
# 13W13, Sec. 13, T41S, R23E
The proposed operating data for the wells is as follows:
Injection Interval: Paradox Formation 5303'-5348'
Maximum Estimated Surface Pressure: 3000 psig
Maximum Estimated Water Injection Rate: 500 BWPD
Approval of this Application will be granted unless any objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections should be mailed to the Division of Oil, Gas and Mining, Attention: UIC Program Manager, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.
DATED this 8th day of September, 1986.
STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
MARJORIE L. ANDERSON
Administrative Assistant
A-75

Being first duly sworn, deposes and says that he/she is legal advertising clerk of THE SALT LAKE TRIBUNE, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah, and of the DESERET NEWS, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah.

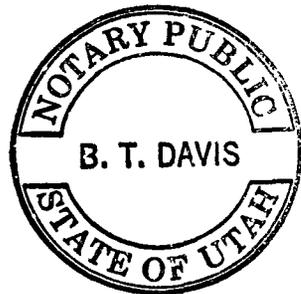
That the legal notice of which a copy is attached hereto CAUSE #UIC-087

was published in said newspaper on SEPT 18, 1986
[Signature]
Legal Advertising Clerk

Subscribed and sworn to before me this 30th day of SEPTEMBER A.D. 1986

B. J. Davis
Notary Public

My Commission Expires MARCH 01, 1988



AFFIDAVIT OF PUBLICATION

Public notice

BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES, STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF PHILLIPS PETROLEUM COMPANY, FOR ADMINISTRATIVE APPROVAL TO INJECT FLUID INTO WELLS TO BE CONVERTED TO ENHANCED RECOVERY INJECTION WELLS LOCATED IN SECTIONS 11, 12, AND 13, TOWNSHIP 41 SOUTH, RANGE 23 EAST, AND SECTIONS 8, 17 AND 18, TOWNSHIP 41 SOUTH, RANGE 24 EAST, S.L.M., SAN JUAN COUNTY, UTAH

CAUSE NO. UIC-087

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER

Notice is hereby given that Phillips Petroleum Company, Box 2920, Casper, Wyoming 82602, has requested administrative approval from the Division to convert the following listed wells to enhanced recovery water injection wells:

- RATHERFORD UNIT - San Juan County, Utah
#11W42, Sec. 11, T41S, R23E
#12W11, Sec. 12, T41S, R23E
#12W33, Sec. 12, T41S, R23E
#13W11, Sec. 13, T41S, R23E
#13W13, Sec. 13, T41S, R23E
#13W22, Sec. 13, T41S, R23E
#13W33, Sec. 13, T41S, R23E
# 8W34, Sec. 8, T41S, R24E
#17W32, Sec. 17, T41S, R24E
#18W12, Sec. 18, T41S, R24E

The proposed operating data for the wells is as follows:

INJECTION INTERVAL: Paradox Formation 5303' - 5548'
MAXIMUM ESTIMATED SURFACE PRESSURE: 3000 psig
MAXIMUM ESTIMATED WATER INJECTION RATE: 500 BWPD.

Approval of this Application will be granted unless any objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections should be mailed to the Division of Oil, Gas and Mining, Attention: UIC Program Manager, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 8th day of September, 1986.
STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
s/MARJORIE L. ANDERSON
Administrative Assistant
Published in The San Juan Record
September 24, 1986.

I, J. A. Martin, being duly sworn, depose and say that I am the publisher of The San Juan Record, a weekly newspaper of general circulation published at Monticello, Utah every Wednesday; that notice on converting wells, CAUSE NO. UIC-087

a copy of which is hereunto attached, was published in the regular and entire issue of each number of said newspaper for a period of one issues, the first publication having been made on September 24, 1986. last publication having been made on

Joyce A. Martin
Publisher

Subscribed and sworn to before me this 24th day of September, A.D. 1986

Ingrid K. Adams
Notary Public residing at Monticello, Utah

My commission expires December 2, 1987

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE  
(Other instructions on reverse side)

Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-603-246A	
2. NAME OF OPERATOR Phillips Petroleum Company		6. IF INDIAN, ALLOTTED OR TRIBE NAME Navajo 122428	
3. ADDRESS OF OPERATOR P. O. Box 2920, Casper, WY 82602		7. UNIT ASSIGNMENT NAME SW-I-4192	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 775' FSL, 1980' FWL (SE SW)		8. FARM OR LEASE NAME Ratherford Unit	
14. PERMIT NO. 43-037-31151		9. WELL NO. 12-24	
15. ELEVATIONS (Show whether SF, ST, OR, etc.) 4611' RKB		10. FIELD AND POOL, OR WILDCAT Greater Aneth	
		11. SEC., T., R., N., OR B.L.K. AND SURVEY OR AREA Sec. 12-T41S-R23E	
		12. COUNTY OR PARISH San Juan	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input checked="" type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANE <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) Convert to Water Injection <input checked="" type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

It is proposed to convert Ratherford Unit #12-24 from a Zone I producing well to a Zone I water injection well. Upon conversion, the well will be acidized with approximately 4550 gallons of 28% HCl Acid and placed on injection.

A 10' x 8' x 6' fenced pit will be constructed on location in a previously disturbed area. Upon completion of the workover, the pit will be dried and recovered.

5-BLM, Farmington, NM  
Utah O&G CC, Salt Lake City, Utah  
1-P. J. Adamson  
1-M. Williams, 302 TRW  
1-J. R. Reno  
1-B. J. Murphy  
1-File RC

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING  
DATE: 12/1/86  
BY: [Signature]  
Approval letter 10/9/86

RECEIVED  
NOV 21 1986  
DIVISION OF  
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature] TITLE Area Manager DATE November 17, 1986  
D. C. Gill

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

MONTHLY REPORT OF ENHANCED RECOVERY PROJECT - PART 2 Page 2

MONTHLY MONITORING OF INJECTION WELLS

<u>Well Name</u>	<u>Inj. Press.</u>	<u>Inj. Rate</u>	<u>Annulus Press.</u>	<u>Monthly Inj. Vol.</u>
9W41-43-037-16399 ✓	SI	SI		SI
9W43 43-037-16400 ✓	SI	SI		SI
10W21 43-037-16401 ✓	SI	SI		SI
10W23 43-037-16402 ✓	1250	270		7548
10W43 43-037-16403 ✓	1225	24		6665
11W44 43-037-15842 ✓	2300	235		6581
12W13 43-037-16404 ✓	2350	114		3180
12W22 43-037-15845 ✓	300	618		17,313
43-037-31151				
12W24 New 2/21/87 ✓	0	559		4469
12W31 43-037-15847 ✓	0	485		13,589
12W33 43-037-15848 ✓	150	447		12,503
12W42 43-037-15850 ✓	1700	532		14,887
12W44 43-037-16405 ✓	SI	SI		SI
43-037-31152				
13W11 New 2/20/87 ✓	0	287		2584
43-037-15852				
13W22 New 2/23/87	0	391		2349
43-037-15853				
13W24 New 2/3/87	0	332		8638
43-037-16406				
13W32 2/2/87	Converted to a producing oil well			
13W42 43-037-15857 ✓	1850	365		10,211
13W44 43-037-16407 ✓	2300	165		4609
43-037-15860				
14W42 New 2/27/87	0	353		707
14W43 43-037-16410 ✓	SI	SI		SI
15W21 43-037-16411 ✓	1075	302		8446



LOCATION: SESW Sec 12 - T41S - R23 E

WELL COMPLETION: Injector

PRESENT STATUS: Conversion

FIELD: GREATER ANGELO

RESERVOIR: Desert Creek Zone I

RKB 4611  
GL 4599

110'

SURFACE CASING: 13<sup>3</sup>/<sub>8</sub>" 54.5#

Well #: 12W24

1595'

INTERMEDIATE CASING: 9<sup>5</sup>/<sub>8</sub>" 36#

PRODUCTION CASING: 7" 26# / 23#

PERFORATIONS:  
5411-5421'  
5366-5402'  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PACKER: Baker Model AB  
Tension Type or Similar set  
at 5296'

Logs on file: \_\_\_\_\_  
Gamma Ray  
Density Porosity  
Neutron Porosity  
Electrical Resistivity  
Caliper  
Microlog  
\_\_\_\_\_

PBTD: 5435'  
OTD: 5470'

5469'

Phillips Petroleum Company

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

SUBMIT IN TRIPPLICATE  
(Other instructions on  
reverse side)

Form approved.  
Budget Bureau No. 1004-0135  
Expires August 31, 1985

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

<p>1. <input type="checkbox"/> OIL WELL    <input type="checkbox"/> GAS WELL    <input type="checkbox"/> OTHER <u>Water Injector</u></p> <p>2. NAME OF OPERATOR <u>Phillips Petroleum Company</u></p> <p>3. ADDRESS OF OPERATOR <u>P.O. Box 2920, Casper, WY 82602</u></p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  <u>775' FSL, 1980' FWL    SE SW</u> <u>API# 43-037-31151</u></p> <p>14. PERMIT NO. _____</p>	<p>5. LEASE DESIGNATION AND SERIAL NO. <u>14-20-603-246A</u></p> <p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME <u>NAVAJO</u></p> <p>7. UNIT AGREEMENT NAME <u>SW-I-4192</u></p> <p>8. FARM OR LEASE NAME <u>Ratherford Unit</u></p> <p>9. WELL NO. <u>12W24</u></p> <p>10. FIELD AND POOL, OR WILDCAT <u>Greater Aneth</u></p> <p>11. SEC., T., R., N., OR BLM. AND SUBSET OR AREA <u>Sec. 12-T41S-R23E</u></p> <p>12. COUNTY OR PARISH    13. STATE <u>San Juan                  Utah</u></p>
<p>15. ELEVATIONS (Show whether SP, ST, OR, etc.) <u>4611' RKB</u></p>	

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <u>Convert to water injection</u> <input checked="" type="checkbox"/>	
(Other) _____		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Feb. 12, 1987 through Feb. 17, 1987

RU 2/12/87. COOH w/rods and tbg. Clean out hole to 5447'. Acidized Zone I w/4550 gal 28% HCL acid. Swbd back load. GIH w/Duoline 2-3/8" tbg and wtr injection pkr. Set pkr at 5307'. RD 2/17/87. HU to injection 2/21/87.

Production Before	16 BOPD	0 BWPD
Injection After	559 BWPD @ 2100 psi	

**RECEIVED**

**AUG 4 1987**

DIVISION OF OIL  
GAS & MINING

4-BLM, Farmington, NM	1-Chieftain
2-Utah O&G CC, SLC, UT	1-Mobil Oil
1-M. Williams, B'Ville	1-Texaco, Inc.
1-J. Landrum, Denver	1-Chevron USA
1-J. Reno, Cortez	1-File RC

18. I hereby certify that the foregoing is true and correct

SIGNED D. C. Gitt TITLE Area Manager DATE 7/27/87

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

<p>1. <input type="checkbox"/> OIL WELL    <input type="checkbox"/> GAS WELL    <input type="checkbox"/> OTHER    WATER INJECTION &amp; WATER SUPPLY WELLS</p> <p>2. NAME OF OPERATOR PHILLIPS PETROLEUM COMPANY</p> <p>3. ADDRESS OF OPERATOR 152 N. DURBIN, 2ND FLOOR, CASPER, WYOMING 82601</p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface  <u>SEE ATTACHED</u></p>		<p>5. LEASE DESIGNATION AND SERIAL NO.  SW-I-4192</p> <p>7. UNIT AGREEMENT NAME RATHERFORD UNIT #7960041920</p> <p>8. FARM OR LEASE NAME</p> <p>9. WELL NO. VARIOUS (see attached)</p> <p>10. FIELD AND POOL, OR WILDCAT GREATER ANETH</p> <p>11. SEC., T., R., M., OR BLK. AND SURVEY OR ABBA Sections 1 thru 30 T41S - R23E &amp; 24E</p> <p>12. COUNTY OR PARISH    13. STATE San Juan                      Utah</p>
<p>14. PERMIT NO.</p>	<p>15. ELEVATIONS (Show whether <u>DR., RT., OR, etc.</u>) OIL, GAS &amp; MINING</p>	

**RECEIVED**  
 MAR 20 1989

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PCLL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANE <input type="checkbox"/>	(Other) <u>CHANGE OF OWNERSHIP</u> <input checked="" type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

This is to advise all Water Injection and Water Supply Wells on the Ratherford Unit, listed on the attached sheet, were sold to Phillips Petroleum Company, effective August 1, 1985.  
  
(former Operator - Phillips Oil Company)

3 - BLM, Farmington, NM  
2 - Utah O&G CC, SLC, UT  
1 - File

18. I hereby certify that the foregoing is true and correct

SIGNED S. H. Oden TITLE District Superintendent DATE March 17, 1989

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

# DOWN HOLE SCHEMATIC

Date: 8/6/87

RATHERFORD Unit # 12W24

LOCATION SE SW sec. 12  
T415-R23E

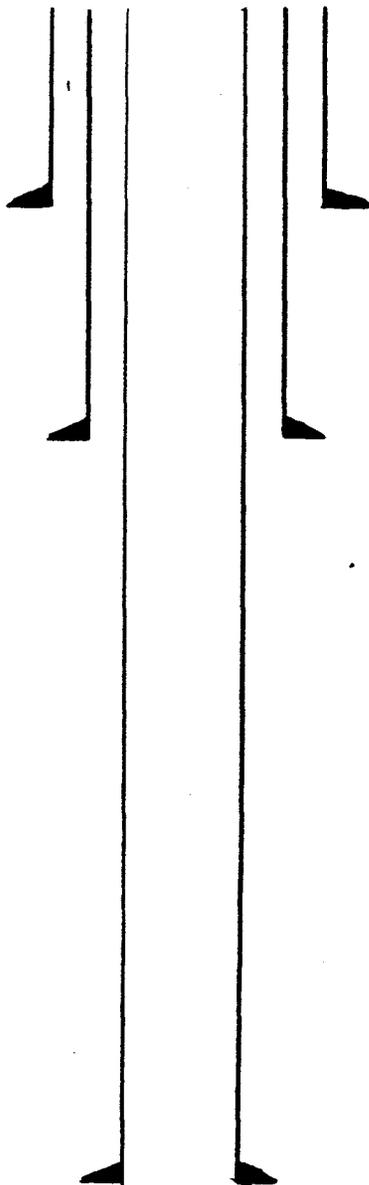
RKB Elev. 4611'

Well Drld 9/12/85

GL Elev. 4600'

Well converted to injector 2/17/87

RKB Above GL' 11'



CONDUCTOR Csg 1 3/8" @ 109'

SURFACE CSG. 9 5/8" @ 1593'

TOC 1750' CMC

Tubing 2 3/8" @ 5296' Duoline HT2

PACKER OTIS Inter-lock PKR  
Ni COATED @ 5307

PERFS	<u>5366 - 5402</u>	_____	_____
	<u>5411 - 5421</u>	_____	_____
	_____	_____	_____
	_____	_____	_____

PBTD 5447'

PRODUCTION Csg. 7" @ 5469'  
K-55, N-80, 23#, 26#

All PERFS ZONE I UNLESS NOTED

42 181 30 SHEETS 3 SQUARE  
43 182 100 SHEETS 3 SQUARE  
44 183 210 SHEETS 3 SQUARE



MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

ACCOUNT NUMBER: N0772

P J KONKEL  
PHILLIPS PETROLEUM COMPANY  
5525 HWY 64 NBU 3004  
FARMINGTON NM 87401

RECEIVED

AUG 16 1993

REPORT PERIOD (MONTH/YEAR):

6 / 93

DIVISION OF  
OIL, GAS & MINING

AMENDED REPORT  (Highlight Changes)

Well Name			Producing Zone	Well Status	Days Oper	Production Volumes		
API Number	Entity	Location				OIL(BBL)	GAS(MCF)	WATER(BBL)
#21-23								
4303713754	06280	41S 24E 21	DSCR	POW	29	1374	883	58
#3-44								
4303715031	06280	41S 24E 3	DSCR	POW	30	111	94	2905
#3-14								
4303715124	06280	41S 24E 3	DSCR	POW	30	67	23	302
#9-12								
4303715126	06280	41S 24E 9	DSCR	POW	30	112	654	17363
#9-14								
4303715127	06280	41S 24E 9	DSCR	POW	30	201	315	423
#28-12								
4303715336	06280	41S 24E 28	PRDX	POW	29	112	47	2428
#29-12								
4303715337	06280	41S 24E 29	PRDX	POW	29	56	0	672
#29-32								
4303715339	06280	41S 24E 29	DSCR	POW	29	1402	287	2224
#29-34								
4303715340	06280	41S 24E 29	DSCR	POW	29	757	48	0
#30-32								
4303715342	06280	41S 24E 30	DSCR	POW	29	588	1049	3744
#3-12								
4303715620	06280	41S 24E 3	DSCR	POW	30	268	11	363
#9-34								
4303715711	06280	41S 24E 9	DSCR	POW	30	45	46	9800
#10-12								
4303715712	06280	41S 24E 10	DSCR	POW	30	45	23	1088
TOTALS						5138	3480	41370

COMMENTS: Effective July 1, 1993, Phillips Petroleum Company has sold its interest in the Ratherford Unit to Mobil Exploration and Producing U.S., Incorporated, P. O. Box 633, Midland, Texas 79702. Mobil assumed operations on July 1, 1993.

I hereby certify that this report is true and complete to the best of my knowledge.

Date: 8/11/93

Name and Signature: PAT KONKEL

*Pat Konkell*

Telephone Number: 505 599-3452

# MONTHLY OIL AND GAS DISPOSITION REPORT

OPERATOR NAME AND ADDRESS:

*L B Sheffield*  
 BRIAN BERRY  
 M E P N A MOBIL  
 POB 219031 1807A RENTWR P.O. DRAWER G  
 DALLAS TX 75221-9031 CORTEZ, Co. 81321

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 7 / 93

AMENDED REPORT  (Highlight Changes)

*\*931006 updated. See*

ENTITY NUMBER	PRODUCT	GRAVITY	BEGINNING INVENTORY	VOLUME PRODUCED	DISPOSITIONS				ENDING INVENTORY
		BTU			TRANSPORTED	USED ON SITE	FLARED/VENTED	OTHER	
05980	OIL			177609	177609	0			
	GAS			72101	66216	5885			
11174	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
TOTALS				249710	243925	5885			

**RECEIVED**

SEP 13 1993

DIVISION OF  
OIL, GAS & MINING

COMMENTS: PLEASE NOTE ADDRESS change. Mobil ASSU PRODUCTION Reports will be compiled and sent from the Cortez, Co. office IN THE FUTURE.

I hereby certify that this report is true and complete to the best of my knowledge.

Date: 9/5/93

Name and Signature: Lwell B Sheffield

Telephone Number: 303 565 2212  
244 658 2578

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION & SERIAL NO.

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

NAVAJO TRIBAL

1. OIL WELL  GAS WELL  OTHER

7. UNIT AGREEMENT NAME

RATHERFORD UNIT

2. NAME OF OPERATOR

MOBIL OIL CORPORATION

8. FARM OR LEASE NAME

3. ADDRESS OF OPERATOR

P. O. BOX 633 MIDLAND, TX 79702

9. WELL NO.

SEP 13 1993

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)

At surface  
At proposed prod. zone

10. FIELD AND POOL, OR WILDCAT

GREATER ANETH

DIVISION OF OIL, GAS & MINING

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

14. API NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY  
SAN JUAN

13. STATE  
UTAH

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF   
 FRACTURE TREAT   
 SHOOT OR ACIDIZE   
 REPAIR WELL   
 (Other)   
 FULL OR ALTER CASING   
 MULTIPLE COMPLETE   
 ABANDON   
 CHANGE PLANS

WATER SHUT-OFF   
 FRACTURE TREATMENT   
 SHOOTING OR ACIDIZING   
 (Other) CHANGE OF OPERATOR   
 (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)  
 REPAIRING WELL   
 ALTERING CASING   
 ABANDONMENT\*

APPROX. DATE WORK WILL START \_\_\_\_\_

DATE OF COMPLETION \_\_\_\_\_

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

\* Must be accompanied by a cement verification report.

AS OF JULY 1, 1993, MOBIL OIL CORPORATION IS THE OPERATOR OF THE RATHERFORD UNIT. ATTACHED ARE THE INDIVIDUAL WELLS.

18. I hereby certify that the foregoing is true and correct

SIGNED Shirley Todd

TITLE ENV. & REG TECHNICIAN

DATE 9-8-93

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

Sept 29, 1993

TO: Lisha Cordova - Utah Mining  
Oil & Gas

FROM: Janice Casley  
BLM Farmington, NM  
505 599-6355

Here is copy of Rutherford Unit  
Successor Operator.

4 pages including this one.

*File Ratherford Unit (GC)*

RECEIVED  
BLM

JUL 27 AM 11:44

Navajo Area Office  
P. O. Box 1060  
Gallup, New Mexico 87305-1060

070 FARMINGTON, NM

ARES/543

JUL 23 1993

MINERALS DEPARTMENT
NO. 137
DATE
BY
3
2
FARMINGTON
GPS
ALL SUPV.
FILED

Mr. G. D. Cox  
Mobil Exploration and  
Producing North America, Inc.  
P. O. Box 633  
Midland, Texas 79702

Dear Mr. Cox:

Enclosed for your information and use is the approved Designation of Operator between the Phillips Petroleum Company and Mobil Exploration and Producing North America, Inc. for the Ratherford Unit.

Please note that all other concerned parties will be furnished their copy of the approved document.

Sincerely,

ACTING Area Director

Enclosure

cc: Bureau of Land Management, Farmington District Office w/enc.  
TNN, Director, Minerals Department w/enc.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS

RECEIVED  
BLM

DESIGNATION OF OPERATOR

Phillips Petroleum Company is, on the records of the Bureau of Indian Affairs, operator of the Ratherford Unit,

7/19/93 11:44  
070 FARMINGTON, NM

AREA OFFICE: Window Rock, Arizona  
LEASE NO: Attached hereto as Exhibit "A"

and, pursuant to the terms of the Ratherford Unit Agreement, is resigning as Unit Operator effective July 1, 1993, and hereby designates

NAME: Mobil Exploration and Producing North America Inc., duly elected pursuant to the terms of the Ratherford Unit Agreement,

ADDRESS: P. O. Box 633, Midland, Texas 79702  
Attn: G. D. Cox

as Operator and local agent, with full authority to act on behalf of the Ratherford Unit lessees in complying with the terms of all leases and regulations applicable thereto and on whom the authorized officer may serve written or oral instructions in securing compliance with the Operating Regulations (43 CFR 3160 and 25 CFR 211 and 212) with respect to (described acreage to which this designation is applicable):

Attached hereto as Exhibit "A"

Bond coverage under 25 CFR 211, 212 or 225 for lease activities conducted by the above named designated operator is under Bond Number 05202782 (attach copy). Evidence of bonding is required prior to the commencement of operations.

It is understood that this designation of operator does not relieve any lessee of responsibility for compliance with the terms of the leases and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the leases.

In case of default on the part of the designated operator, the lessees will make full and prompt compliance with all regulations, lease terms, stipulations, or orders of the Secretary of the Interior or his representative.

Attached is the appropriate documentation relevant to this document.

The designated operator agrees to promptly notify the authorized officer of any change in the operatorship of said Ratherford Unit.

Phillips Petroleum Company

June 17, 1993

By: M. B. [Signature]  
Attorney-in-Fact

Mobil Exploration and Producing  
North America Inc.

June 11, 1993

By: B. D. [Signature]  
Attorney-in-Fact B.D. MARTINY

[Signature] ACTING AREA DIRECTOR  
APPROVED BY TITLE DATE  
7/19/93

APPROVED PURSUANT, TO SECRETARIAL REDELEGATION ORDER 209 DM 8 AND 230 DM 3.

This form does not constitute an information collection as defined by 44 U.S.C. 3502 and therefore does not require OMB approval.

## EXHIBIT "A"

ATTACHED TO AND MADE A PART OF DESIGNATION OF SUCCESSOR OPERATOR, RATHERFORD UNIT

## EXHIBIT "C"

Revised as of September 29, 19921  
SCHEDULE OF TRACT PERCENTAGE PARTICIPATION

<u>Tract Number</u>	<u>Description of Land</u>	<u>Serial Number and Effective Date of Lease</u>	<u>Tract Percentage Participation</u>
1	S/2 Sec. 1, E/2 SE/4 Sec. 2, E/4 Sec. 11, and all of Sec. 12, T-41-S, R-23-E, S.L.M. San Juan County, Utah	14-20-603-246-A Oct. 5, 1953	11.0652565
2	SE/4 and W/2 SW/4 Sec. 5, the irregular SW/4 Sec. 6, and all of Sec. 7 and 8, T-41-S, R-24-E, San Juan County, Utah	14-20-603-368 Oct. 26, 1953	14.4159942
3	SW/4 of Sec. 4, T-41-S, R-24-E, San Juan County, Utah	14-20-603-5446 Sept. 1, 1959	.5763826
4	SE/4 Sec. 4, and NE/4 Sec. 9, T-41-S, R-24-E, San Juan County, Utah	14-20-603-4035 March 3, 1958	1.2587779
5	SW/4 of Sec. 3, T-41-S, R-24-E, S.L.M., San Juan County, Utah	14-20-603-5445 Sept. 3, 1959	.4667669
6	NW/4 of Sec. 9, T-41-S, R-24-E, S.L.M., San Juan County, Utah	14-20-603-5045 Feb. 4, 1959	1.0187043
7	NW/4, W/2 NE/4, and SW/4 Sec. 10, SE/4 Sec. 9, T-41-S, R-24-E, San Juan County, Utah	14-20-603-4043 Feb. 18, 1958	3.5097575
8	SW/4 Sec. 9, T-41-S, R-24-E, S.L.M. San Juan County, Utah	14-20-603-5046 Feb. 4, 1959	1.1141679
9	SE/4 Sec. 10 and S/2 SW/4 Sec. 11 T-41-S, R-24-E, San Juan County, Utah	14-20-603-4037 Feb. 14, 1958	2.6186804
10	All of Sec. 13, E/2 Sec. 14, and E/2 SE/4 and N/2 Sec. 24, T-41-S, R-23-E, S.L.M., San Juan County, Utah	14-20-603-247-A Oct. 5, 1953	10.3108861
11	Sections 17, 18, 19 and 20, T-41-S, R-24-E, San Juan County Utah	14-20-603-353 Oct. 27, 1953	27.3389265
12	Sections 15, 16, 21, and NW/4, and W/2 SW/4 Sec. 22, T-41-S, R-24-E, San Juan County, Utah	14-20-603-355 Oct. 27, 1953	14.2819339
13	W/2 Section 14, T-41-S, R-24-E, San Juan County, Utah	14-20-603-370 Oct. 26, 1953	1.8500847
14	N/2 and SE/4, and E/2 SW/4 Sec. 29, NE/4 and E/2 SE/4 and E/2 W/2 irregular Sec. 30, and E/2 NE/4 Sec. 32, T-41-S, R-24-E, San Juan County, Utah	14-20-603-407 Dec. 10, 1953	6.9924969
15	NW/4 Sec. 28, T-41-S, R24-E San Juan County, Utah	14-20-603-409 Dec. 10, 1953	.9416393
16	SE/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6504 July 11, 1961	.5750254
17	NE/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6505 July 11, 1961	.5449292
18	NW/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6506 July 11, 1961	.5482788
19	NE/4 Sec. 4, T-41-S, R24-E San Juan County, Utah	14-20-0603-7171 June 11, 1962	.4720628
20	E/2 NW/4 Sec. 4, T-41-S, R-24-E San Juan County, Utah	14-20-0603-7172 June 11, 1962	.0992482
100% Indian Lands	TOTAL 12,909.74		100.0000000

Division of Oil, Gas and Mining  
**PHONE CONVERSATION DOCUMENTATION FORM**

Route original/copy to:

Well File \_\_\_\_\_  
\_\_\_\_\_  
(Location) Sec \_\_\_ Twp \_\_\_ Rng \_\_\_  
(API No.) \_\_\_\_\_

Suspense  
(Return Date) \_\_\_\_\_  
(To - Initials) \_\_\_\_\_

Other  
OPERATOR CHANGE

1. Date of Phone Call: 10-6-93 Time: 9:30

2. DOGM Employee (name) L. CORDOVA (Initiated Call   
Talked to:

Name GLEN COX (Initiated Call  - Phone No. (915) 688-2114  
of (Company/Organization) MOBIL

3. Topic of Conversation: OPERATOR CHANGE FROM PHILLIPS TO MOBIL "RATHERFORD UNIT".  
(NEED TO CONFIRM HOW OPERATOR WANTS THE WELLS SET UP - MEPNA AS PER BIA APPROVAL  
OR MOBIL OIL CORPORATION AS PER SUNDRY DATED 9-8-93?)

4. Highlights of Conversation: \_\_\_\_\_  
MR. COX CONFIRMED THAT THE WELLS SHOULD BE SET UNDER ACCOUNT N7370/MEPNA AS  
PER BIA APPROVAL, ALSO CONFIRMED THAT PRODUCTION & DISPOSITION REPORTS WILL NOW  
BE HANDLED OUT OF THEIR CORTEZ OFFICE RATHER THAN DALLAS.

MEPNA-

PO DRAWER G

CORTEZ, CO 81321

(303)565-2212

\*ADDRESS CHANGE AFFECTS ALL WELLS CURRENTLY OPERATED BY MEPNA, CURRENTLY  
REPORTED OUT OF DALLAS (MCELMO CREEK).

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

OCT 25 1993

TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

OIL, GAS & MINING

Well name and number: \_\_\_\_\_  
Field or Unit name: RATHERFORD UNIT API no. \_\_\_\_\_  
Well location: QQ \_\_\_\_\_ section \_\_\_\_\_ township \_\_\_\_\_ range \_\_\_\_\_ county \_\_\_\_\_  
Effective Date of Transfer: July 1, 1993

CURRENT OPERATOR

Transfer approved by:

Name Ed Hasely Company Phillips Petroleum Company  
Signature Ed Hasely Address 5525 HWY. 64  
Title Environmental Engineer Farmington, NM 87401  
Date October 22, 1993 Phone ( 505 ) 599-3460

Comments:

NEW OPERATOR

Transfer approved by:

Name Shirley Todd Company Mobil Exploration & Producing North America  
Signature Shirley Todd Address P O Box 633  
Title Env. & Reg. Technician Midland, TX 79702  
Date October 7, 1993 Phone ( 915 ) 688-2585

Comments:

(State use only)

Transfer approved by [Signature] Title ITC Manager  
Approval Date 10-27-93

Lisha Cordova (801) 538-5340

BEFORE THE OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF UTAH

APPLICATION OF PHILLIPS PETROLEUM )  
 COMPANY FOR THE APPROVAL OF THE )  
 UNIT OPERATIONS AND PRESSURE MAIN- ) CAUSE NO. 63  
 TENANCE PROGRAM FOR THE RATHERFORD )  
 UNIT IN THE GREATER ANETH AREA, )  
 SAN JUAN COUNTY, UTAH )

ORDER

This Cause came on for hearing before the Oil and Gas Conservation Commission of the State of Utah at 10 o'clock a. m. on Wednesday, September 13, 1961, in the Crystal Room, Hotel Newhouse, Fourth South at Main Street, Salt Lake City, Utah, pursuant to notice duly and regularly given. The entire Commission, except Walter G. Mann, was present, Edward W. Clyde presiding. Appearances were made as follows: Cecil C. Hamilton, attorney, on behalf of Phillips Petroleum Company; Clair M. Senior, attorney, on behalf of Texaco, Inc.; Gordon Mayberry, attorney, on behalf of Continental Oil Company; R. R. Robison on behalf of Shell Oil Company. Others present included Carl Trawick, on behalf of United States Geological Survey; and J. R. White, on behalf of Texaco, Inc.

Evidence in support of the application was introduced by Phillips Petroleum Company, the applicant and Unit Operator of the Ratherford Unit, which embraces as the unit area the following described land in San Juan County, State of Utah, to wit:

TOWNSHIP 41 SOUTH, RANGE 23 EAST, 11EM

Section 1:	All	Sections 12 and 13:	All
Section 2:	E/2	Section 14:	E/2
Section 11:	E/2	Section 24:	All

TOWNSHIP 41 SOUTH, RANGE 24 EAST, 11EM

Section 3:	SW/4	Sections 15	All
Section 4:	S/2	through 21:	NW/4 and
Sections 5 through 9:	All	Section 22:	E/2 of the
Section 10:	S/2 and NW/4		SW/4
	and W/2 of NE/4	Section 23:	NE/4 and
Section 11:	S/2 of SW/4		E/2 of NE/4
			and W/2 of SW/4
Section 14:	E/2	Section 29 and 30:	All
		Section 31:	E/2
		Section 32:	E/2

R. R. Robison on behalf of Shell Oil Company stated that (as contemplated by paragraph No. 5 of the Commission's order of February 24, 1959, in Cause No. 17 authorizing the drilling of certain test wells) Shell would submit to the Commission, as arbiter, the question as between Shell and Superior Oil Company

of the monetary value, if any, to be attributed to three test wells drilled within the Rutherford Unit area pursuant to said order of February 24, 1959.

No objection to the granting of the application was filed or expressed. The Shell Oil Company, Texaco, Inc. and Continental Oil Company expressed their support of the application of Phillips Petroleum Company.

#### FINDINGS OF FACT

The Commission finds that:

1. The unitized operation of the Rutherford Unit Area will enable pressure maintenance operations to be initiated and permit such Area to be operated in a manner which will prevent waste, protect correlative rights and result in greater ultimate recovery of oil and gas.

2. The Rutherford Unit Agreement has been approved by the various signatory parties as fair, reasonable and acceptable.

3. The water injection pressure maintenance program proposed by the applicant appears to be proper and designed to result in the greatest economic recovery of oil and gas to the end that all concerned, including the general public, may realize and enjoy the greatest good from the oil and gas resources of the unitized lands.

#### ORDER

THEREFORE, IT IS ORDERED BY THE COMMISSION, and subject to its continuing jurisdiction, that:

1. Unit operation of the Rutherford Unit Area under the Rutherford Unit Agreement is approved.

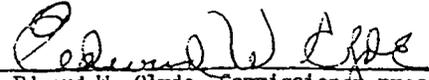
2. The plan and program of water injection pressure maintenance operations proposed by applicant in its application filed herein should be and the same is hereby approved and the unit operator is authorized to proceed with and under such plan and program as soon as the Rutherford Unit Agreement becomes effective and operative.

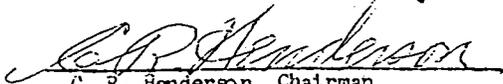
3. If, at any time or from time to time, it appears necessary or desirable to the unit operator to alter or modify the hereby approved plan of pressure maintenance, any such alteration or modification shall be submitted for

and shall be subject to approval by the Commission or its delegated representative, which approval may be given without notice or hearing, unless otherwise ordered or directed by the Commission.

Dated this 13th day of September, 1961.

THE OIL AND GAS CONSERVATION  
COMMISSION OF THE STATE OF UTAH

  
Edward W. Clyde, Commissioner presiding

  
C. R. Henderson, Chairman

  
H. V. Hatch, Commissioner

  
C. S. Thomson, Commissioner

\_\_\_\_\_  
Walter G. Mann, Commissioner

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

Routing:

1-VLC/47-93
2-DES/58-93
3-VLC
4-RJF
5-IB
6-RL

Attach all documentation received by the division regarding this change.  
 Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (well sold)                       Designation of Agent  
 Designation of Operator                               Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 7-1-93)

TO (new operator) <u>M E P N A</u>	FROM (former operator) <u>PHILLIPS PETROLEUM COMPANY</u>
(address) <u>PO DRAWER G</u>	(address) <u>5525 HWY 64 NBU 3004</u>
<u>CORTEZ, CO 81321</u>	<u>FARMINGTON, NM 87401</u>
<u>GLEN COX (915)688-2114</u>	<u>PAT KONKEL</u>
phone <u>(303) 565-2212</u>	phone <u>(505) 599-3452</u>
account no. <u>N7370</u>	account no. <u>N0772(A)</u>

Well(s) (attach additional page if needed):                      **\*RATHERFORD UNIT (NAVAJO)**

Name: <b>**SEE ATTACHED**</b>	API: <u>43-037-31151</u>	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____

**OPERATOR CHANGE DOCUMENTATION**

- Sec 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (Reg. 8-20-93) (6/93 Prod. Rpt. 8-16-93)
- Sec 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). (Reg. 8-31-93) (Rec'd 9-14-93)
- N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) \_\_\_\_\_ If yes, show company file number: \_\_\_\_\_
- Sec 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of Federal and Indian well operator changes should take place prior to completion of steps 5 through 9 below.
- Sec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (O&G wells 10-6-93) (Wiw's 10-26-93)
- Sec 6. Cardex file has been updated for each well listed above. (O&G wells 10-6-93) (Wiw's 10-26-93)
- Sec 7. Well file labels have been updated for each well listed above. (O&G wells 10-6-93) (Wiw's 10-26-93)
- Sec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (10-6-93)
- Sec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

**ENTITY REVIEW**

- 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) \_\_\_\_ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

**BOND VERIFICATION (Fee wells only)**

- 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
- N/A
- \_\_ 2. A copy of this form has been placed in the new and former operators' bond files.
- \_\_ 3. The former operator has requested a release of liability from their bond (yes/no) \_\_\_\_. Today's date \_\_\_\_\_ 19\_\_\_. If yes, division response was made by letter dated \_\_\_\_\_ 19\_\_.

**LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY**

- N/A 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated \_\_\_\_\_ 19\_\_, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
- N/A 2. Copies of documents have been sent to State Lands for changes involving State leases.

**FILMING**

- 1. All attachments to this form have been microfilmed. Date: 11-17 1993.

**FILING**

- 1. Copies of all attachments to this form have been filed in each well file.
- 2. The original of this form and the original attachments have been filed in the Operator Change file.

**COMMENTS**

931006 BIA/B/m Approved 7-9-93.

WELL #	API#	LEASE #	SEC., T, R	LOCATION OF WELL
01W-13	43-037-15838	14-20-603-246A	SEC. 1, T41S, R23E	NW/SW 1980 FSL; 660 FWL
01-14	43-037-31162	14-20-603-246A	SEC. 1, T41S, R23E	SW/SW 660 FSL; 660 FWL
01W-24	43-037-15839	14-20-603-246	SEC. 1, T41S, R23E	SE/SW 651 FSL; 3300 FEL
01-34	43-037-16385	14-20-603-246A	SEC. 1, T41S, R23E	SW/SE 4147 FNL; 1980 FEL
01W-44	43-037-15840	14-20-603-246A	SEC. 1, T41S, R23E	660 FSL; 661 FEL
02W-44	43-037-16386	14-20-603-246A	SEC. 2, T41S, R23E	SE/SE 810 FNL; 5110' FWL
03-14	43-037-15124	14-20-603-5445	SEC. 3, T41S, R24E	660 FSL; 660 FEL
03-12	43-037-15620	14-20-603-6506	SEC. 3, T41S, R24E	SW/NW 2140 FNL; 660 FWL
03W-42	43-037-16388	14-20-603-6505	SEC. 3, T41S, R24E	SW/NE 1980 FNL; 660 FEL
03-44	43-037-15031	14-20-603-6504	SEC. 3, T41S, R24E	520 FSL; 820 FEL
04-14	43-037-16163	14-20-603-5446	SEC. 4, T41S, R24E	500 FSL; 600 FEL
04-34	43-037-16164	14-20-603-4035	SEC. 4, T41S, R24E	660 FSL; 1980 FEL
05-34	43-037-15983	14-20-603-368	SEC. 5, T41S, R24E	SW/SE 612 FSL; 1990 FEL
05W-43	43-037-16392	14-20-603-368	SEC. 5, T41S, R24E	1400 FSL; 990 FEL
06W-14	43-037-15984	14-20-603-368	SEC. 6, T41S, R24E	SW/SW 660; FSL; 660 FWL
06W-23	43-037-16393	14-20-603-368	SEC. 6, T41S, R24E	1830 FSL; 1895 FWL
07-11	43-037-31163	14-20-603-368	SEC. 7, T41S, R24E	NW/NW 660 FNL; 710 FWL
07W-12	43-037-15985	14-20-603-368	SEC. 7, T41S, R24E	SW/NW 2140 FNL; 585 FWL
07-13	43-037-31164	14-20-603-368	SEC. 7, T41S, R24E	NW/SW 2110 FSL; 740 FWL
07W-14	43-037-15986	14-20-603-368	SEC. 7, T41S, R24E	SW/SW 1065 FSL; 660 FWL
07W-21	43-037-16394	14-20-603-368	SEC. 7, T41S, R24E	710 FNL; 1820 FWL
07-22	43-037-31165	14-20-603-368	SEC. 7, T41S, R24E	SE/NW 1980 FNL; 1980 FWL
07W-23	43-037-15987	14-20-603-368	SEC. 7, T41S, R24E	NE/SW 1980 FSL 1980 FWL
07-24	43-037-31166	14-20-603-368	SEC. 7, T41S, R24E	SE/SW 880 FSL; 2414 FWL
07W-32	43-037-15988	14-20-603-368	SEC. 7, T41S, R23E	SW/NE 1980 FNL; 1980 FEL
07-33	43-037-31167	14-20-603-368	SEC. 7, T41S, R24E	NW/SE 2105 FSL; 1876 FEL
07W-34	43-037-15989	14-20-603-368	SEC. 7, T41S, R24E	710 FSL; 2003 FEL
07W-41	43-037-15990	14-20-603-368	SEC. 7, T41S, R24E	NE/NE 585 FNL; 770 FEL
07W43	43-037-16395	14-20-603-368	SEC. 7, T41S, R24E	2110 FSL; 660 FEL
07-44	43-037-31189	14-20-603-368	SEC. 7, T41S, R24E	SE/SE 737 FSL; 555 FEL
08-12	43-037-15991	14-20-603-368	SEC. 8, T41S, R24E	SW/NW 1909 FNL; 520 FWL
08W-14	43-037-15992	14-20-603-368	SEC. 8, T41S, R24E	745 FSL; 575 FWL
08-21	43-037-15993	14-20-603-368	SEC. 8, T41S, R24E	616 FNL; 1911 FWL
08-23	43-037-15994	14-20-603-368	SEC. 8, T41S, R24E	NE/NW 1920 FSL; 2055 FWL
08-32	43-037-15995	14-20-603-368	SEC. 8, T41S, R24E	SW/NE 1980 FNL; 1980 FEL
08-34	43-037-15996	14-20-603-368	SEC. 8, T41S, R24E	SW/SE 660 FSL; 1980 FEL
08-41	43-037-15997	14-20-603-368	SEC. 8, T41S, R24E	NE/NE 660 FNL; 660 FEL
08W-43	43-037-16396	14-20-603-368	SEC. 8, T41S, R24E	1980 FSL; 660 FEL
09W-23	43-037-16398	14-20-603-5046	SEC. 9, T41S, R24E	NW/SE 1980 FSL; 1980 FWL
09-12	43-037-15126	14-20-603-5045	SEC. 9, T41S, R24E	1865 FNL; 780 FWL
09W-21	43-037-16397	14-20-603-5045	SEC. 9, T41S, R24E	660 FNL; 2080 FWL
09-14A	43-037-15127	14-20-603-5046	SEC. 9, T41S, R24E	710 FSL; 660 FWL
09-32	43-037-16165	14-20-603-4035	SEC. 9, T41S, R24E	1980 FNL; 1980 FEL
09W-41	43-037-16399	14-20-603-4035	SEC. 9, T41S, R24E	660 FNL; 660 FEL
09W-43	43-037-16400	14-20-603-4043	SEC. 9, T41S, R24E	1980 FSL; 660 FEL
10W-23	43-037-16402	14-20-603-4043	SEC. 10, T41S, R24E	1980 FSL; 1980 FWL
10-14	43-037-15713	14-20-603-4043	SEC. 10, T41S, R24E	510 FSL; 710 FWL
10-12	43-037-15712	14-20-603-4043	SEC. 10, T41S, R24E	660 FWL; 1980 FNL
10W-21	43-037-16401	14-20-603-4043	SEC. 10, T41S, R24E	810 FNL; 1980 FWL
10-34	43-037-16166	14-20-603-4037	SEC. 10, T41S, R24E	620 FSL; 1860 FEL
10W-43	43-037-16403	14-20-603-4037	SEC. 10, T41S, R24E	1980 FSL; 550 FEL
11-41	43-037-31544	14-20-603-246A	SEC. 11, T41S, R23E	NE/NE 860 FNL; 350 FEL
11-42W	43-037-15841	14-20-603-246	SEC. 11, T41S, R23E	3290 FNL; 4617 FEL
11-43	43-037-31622	14-20-603-246A	SEC. 11, T41S, R23E	1980 FSL; 660 FEL
11W-44	43-037-15842	14-20-603-246A	SEC. 11, T41S, R23E	SE/SE 660 FSL; 558 FEL
12W-11	43-037-15843	14-20-603-246A	SEC. 12, T41S, R23E	NW/NW 678 FNL; 4620 FEL
12-12	43-037-31190	14-20-603-246A	SEC. 12, T41S, R23E	SW/NW 1850 FNL; 660 FWL
12W-13	43-037-16404	14-20-603-246A	SEC. 12, T41S, R23E	1980 FSL; 4620 FEL
12-14	43-037-15844	NA	SEC. 12, T41S, R23E	660 FNL; 4622 FWL
12-21	43-037-31201	14-20-603-246A	SEC. 12, T41S, R23E	NE/NW 660 FNL; 1980 FWL
12W-22	43-037-15845	14-20-603-246	SEC. 12, T41S, R23E	NA
12-23	43-037-15846	14-20-603-246A	SEC. 12, T41S, R23E	1958 FNL; 3300 FWL
12W-24	43-037-31151	14-20-603-246A	SEC. 12, T41S, R23E	775 FSL; 1980
12-32	43-037-31203	14-20-603-246A	SEC. 12, T41S, R23E	SW/NE 1820 FNL; 1820 FEL
12W-33	43-037-15848	14-20-603-246A	SEC. 12, T41S, R23E	NW/SE 1957 FSL; 1981 FEL
12-34	43-037-31126	14-20-603-246A	SEC. 12, T41S, R23E	SW/SE 675 FSL; 1905 FEL
12-41	43-037-15849	14-20-603-246A	SEC. 12, T41S, R23E	656 FNL; 660 FEL
12W-42	43-037-15850	14-20-603-246A	SEC. 12, T41S, R23E	3275 FSL; 662 FEL

PAID RECEIVED

SEP 15 1993

DIVISION OF OIL, GAS & MINING

PAID

PAID PAID

14-20-603-246

SE NW 1920 FNL 2080 FWL



Division of Oil, Gas and Mining  
**PHONE CONVERSATION DOCUMENTATION FORM**

Route original/copy to:

**Well File** \_\_\_\_\_  
(Location) Sec \_\_\_ Twp \_\_\_ Rng \_\_\_  
(API No.) \_\_\_\_\_

**Suspense**  
(Return Date) \_\_\_\_\_  
(To - Initials) \_\_\_\_\_

**Other**  
**OPER NM CHG OF**

1. Date of Phone Call: 8-3-95 Time: \_\_\_\_\_

2. DOGM Employee (name) L. CORDOVA (Initiated Call )  
Talked to:

Name R. J. FIRTH (Initiated Call ) - Phone No. ( ) \_\_\_\_\_

of (Company/Organization) \_\_\_\_\_

3. Topic of Conversation: M E P N A / N7370

4. Highlights of Conversation: \_\_\_\_\_

OPERATOR NAME IS BEING CHANGED FROM M E P N A (MOBIL EXPLORATION AND PRODUCING  
NORTH AMERICA INC) TO MOBIL EXPLOR & PROD. THE NAME CHANGE IS BEING DONE AT  
THIS TIME TO ALLEVIATE CONFUSION, BOTH IN HOUSE AND AMONGST THE GENERAL PUBLIC.  
\*SUPERIOR OIL COMPANY MERGED INTO M E P N A 4-24-86 (SEE ATTACHED).

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

1- <del>LVC</del>	7-PL
2-LWP	8-SJ
3- <del>DES</del>	9-FILE
4-VLC	
5-RJF	
6-LWP	

Attach all documentation received by the division regarding this change.  
 Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (well sold)                       Designation of Agent  
 Designation of Operator                               Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 8-2-95)

TO (new operator) MOBIL EXPLOR & PROD  
 (address) C/O MOBIL OIL CORP  
PO DRAWER G  
CORTEZ CO 81321  
 phone (303) 564-5212  
 account no. N7370

FROM (former operator) M E P N A  
 (address) C/O MOBIL OIL CORP  
PO DRAWER G  
CORTEZ CO 81321  
 phone (303) 564-5212  
 account no. N7370

Well(s) (attach additional page if needed):

Name: <b>** SEE ATTACHED **</b>	API: <u>037-31151</u>	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____	Twp _____	Rng _____	Lease Type: _____

**OPERATOR CHANGE DOCUMENTATION**

- N/A 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form).
- N/A 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form).
- N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) \_\_\_\_\_ If yes, show company file number: \_\_\_\_\_.
- N/A 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.
- LWP 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (8-3-95)
- LWP 6. Cardex file has been updated for each well listed above. 8-21-95
- LWP 7. Well file labels have been updated for each well listed above. 9-28-95
- LWP 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (8-3-95)
- LWP 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- Lee* 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- N/A* 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only) *\* No Fee Lease Wells at this time!*

- N/A* *Lee* 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
2. A copy of this form has been placed in the new and former operators' bond files.
3. The former operator has requested a release of liability from their bond (yes/no) no. Today's date \_\_\_\_\_ 19\_\_\_\_. If yes, division response was made by letter dated \_\_\_\_\_ 19\_\_\_\_.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- N/A* 1. (Rule R615-2-10) The former operator/lessee of any **fee lease** well listed above has been notified by letter dated \_\_\_\_\_ 19\_\_\_\_, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested. *OTS 8/5/95*
- N/A* 2. Copies of documents have been sent to State Lands for changes involving State leases.

FILMING

1. All attachments to this form have been microfilmed. Date: October 4 1995.

FILING

1. Copies of all attachments to this form have been filed in each well file.
2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

*950803 UIC F5/Not necessary!*

STATE OF UTAH  
INVENTORY OF INJECTION WELLS

OPERATOR	API NO.	WELL	TNS	RGE	SE	WELLTYPE	INDIAN COUNT
*****	*****	*****	***	***	**	*****	*****
✓MEPNA (MOBIL	43-037-15506	L-21	41S	25E	18	INJW	Y
✓MEPNA (MOBIL	43-037-16358	K-24	41S	25E	18	INJW	Y
✓MEPNA (MOBIL	43-037-30400	K-22X	41S	25E	18	INJI	Y
✓MEPNA (MOBIL	43-037-15499	J-21	41S	25E	18	INJW	Y
✓MEPNA (MOBIL	43-037-15508	L-25	41S	25E	19	INJW	Y
✓MEPNA (MOBIL	43-037-15839	1W24	41S	23E	1	INJW	Y
✓MEPNA (MOBIL	43-037-15838	1W13	41S	23E	1	INJW	Y
✓MEPNA (MOBIL	43-037-16386	2W44	41S	23E	2	INJW	Y
✓MEPNA (MOBIL	43-037-15842	11W44	41S	23E	11	INJW	Y
✓MEPNA (MOBIL	43-037-15841	11W42	41S	23E	11	INJW	Y
✓MEPNA (MOBIL	43-037-15848	12W33	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-15850	12W42	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-15847	12W31	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-16404	12W13	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-15845	12W22	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-15843	12W11	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-31151	12W24	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-31543	RATERFORD 12	41S	23E	12	INJW	Y
✓MEPNA (MOBIL	43-037-15854	13W31	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-15851	13W13	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-15857	13W42	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-16407	13W44	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-15855	13W33	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-31152	13W11	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-15852	13W22	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-15853	13W24	41S	23E	13	INJW	Y
✓MEPNA (MOBIL	43-037-16410	14W43	41S	23E	14	INJI	Y
✓MEPNA (MOBIL	43-037-15860	14W43	41S	23E	14	INJW	Y
✓MEPNA (MOBIL	43-037-15863	24W42	41S	23E	24	INJW	Y
✓MEPNA (MOBIL	43-037-15862	24W31	41S	23E	24	INJW	Y
✓MEPNA (MOBIL	43-037-15984	6W14	41S	24E	6	INJW	Y
✓MEPNA (MOBIL	43-037-15988	7W32	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-15990	7W41	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-16394	7W21	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-15985	7W12	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-15989	7W34	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-15986	7W14	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-15987	7W23	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-16395	7W43	41S	24E	7	INJW	Y
✓MEPNA (MOBIL	43-037-16396	8W43	41S	24E	8	INJI	Y
✓MEPNA (MOBIL	43-037-15992	8W14	41S	24E	8	INJW	Y
✓MEPNA (MOBIL	43-037-16398	9W23	41S	24E	9	INJW	Y
✓MEPNA (MOBIL	43-037-16400	9W43	41S	24E	9	INJI	Y
✓MEPNA (MOBIL	43-037-16397	9W21	41S	24E	9	INJW	Y
✓MEPNA (MOBIL	43-037-16402	10W23	41S	24E	10	INJW	Y
✓MEPNA (MOBIL	43-037-16401	10W21	41S	24E	10	INJI	Y
✓MEPNA (MOBIL	43-037-16403	10W43	41S	24E	10	INJW	Y
✓MEPNA (MOBIL	43-037-16413	15W43	41S	24E	15	INJI	Y
✓MEPNA (MOBIL	43-037-16411	15W21	41S	24E	15	INJW	Y
✓MEPNA (MOBIL	43-037-16412	15W23	41S	24E	15	INJI	Y
✓MEPNA (MOBIL	43-037-16415	16W43	41S	24E	16	INJW	Y
✓MEPNA (MOBIL	43-037-15720	16W12	41S	24E	16	INJW	Y
✓MEPNA (MOBIL	43-037-15721	16W14	41S	24E	16	INJW	Y

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.

Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well  Gas Well  Other **SIDETRACK**

2. Name of Operator **Mobil Exploration & Producing U.S. Inc.  
as Agent for Mobil Producing TX & NM Inc.**

3. Address and Telephone No.  
**P.O. Box 633, Midland, TX 79702 915-688-2585**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**775' FSL & 1980 FWL  
SEC.12, T41S, R23E**

5. Lease Designation and Serial No.

**14-20-603-246A**

6. If Indian, Allottee or Tribe Name

**NAVAJO TRIBAL**

7. If Unit or CA, Agreement Designation

**RATHERFORD UNIT**

8. Well Name and No.

**RATHERFORD 12-24**

9. API Well No.

**43-037-31151**

10. Field and Pool, or exploratory Area

**GREATER ANETH**

11. County or Parish, State

**SAN JUAN UT**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- Notice of Intent  
 Subsequent Report  
 Final Abandonment Notice

TYPE OF ACTION

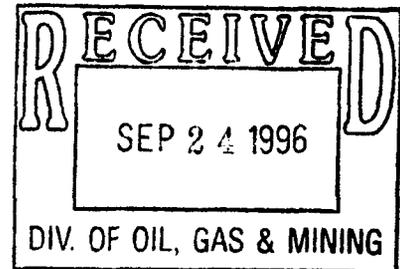
- Abandonment  
 Recompletion  
 Plugging Back  
 Casing Repair  
 Altering Casing  
 Other **SIDETRACK**  
 Change of Plans  
 New Construction  
 Non-Routine Fracturing  
 Water Shut-Off  
 Conversion to Injection  
 Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

- LEG #1 BOTTOM HOLE LOCATION: 1457' SOUTH & 875' EAST FROM SURFACE SPOT (ZONE 1d)  
BEARING & DISTANCE: 1700' FROM SURFACE LOCATION @ 149 DEGREES AZIMUTH.**  
**LEG #2 BOTTOM HOLE LOCATION: 862' NORTH & 1103' WEST FROM SURFACE SPOT (ZONE 1d)  
BEARING & DISTANCE: 1400' FROM SURFACE LOCATION AT 308 DEGREES AZIMUTH.**  
**LEG #3 BOTTOM HOLE LOCATION: 1283' SOUTH & 1115' EAST FROM SURFACE SPOT (ZONE 1c)  
BEARING & DISTANCE: 1700' FROM SURFACE LOCATION AT 139 DEGREES AZIMUTH.**  
**LEG #4 BOTTOM HOLE LOCATION: 936' NORTH & 1040' WEST FROM SURFACE SPOT (ZONE 1c-1a)  
BEARING & DISTANCE: 1400' FROM SURFACE LOCATION AT 318 DEGREES AZIMUTH**

SEE ATTACHED PROCEDURE.



14. I hereby certify that the foregoing is true and correct

Signed Shelby Houchins

Title **ENV. & REG. TECHNICIAN**

Date **09-20-96**

(This space for Federal or State office use)

Approved by [Signature]

Title **Petroleum Engineer**

Date **9/26/96**

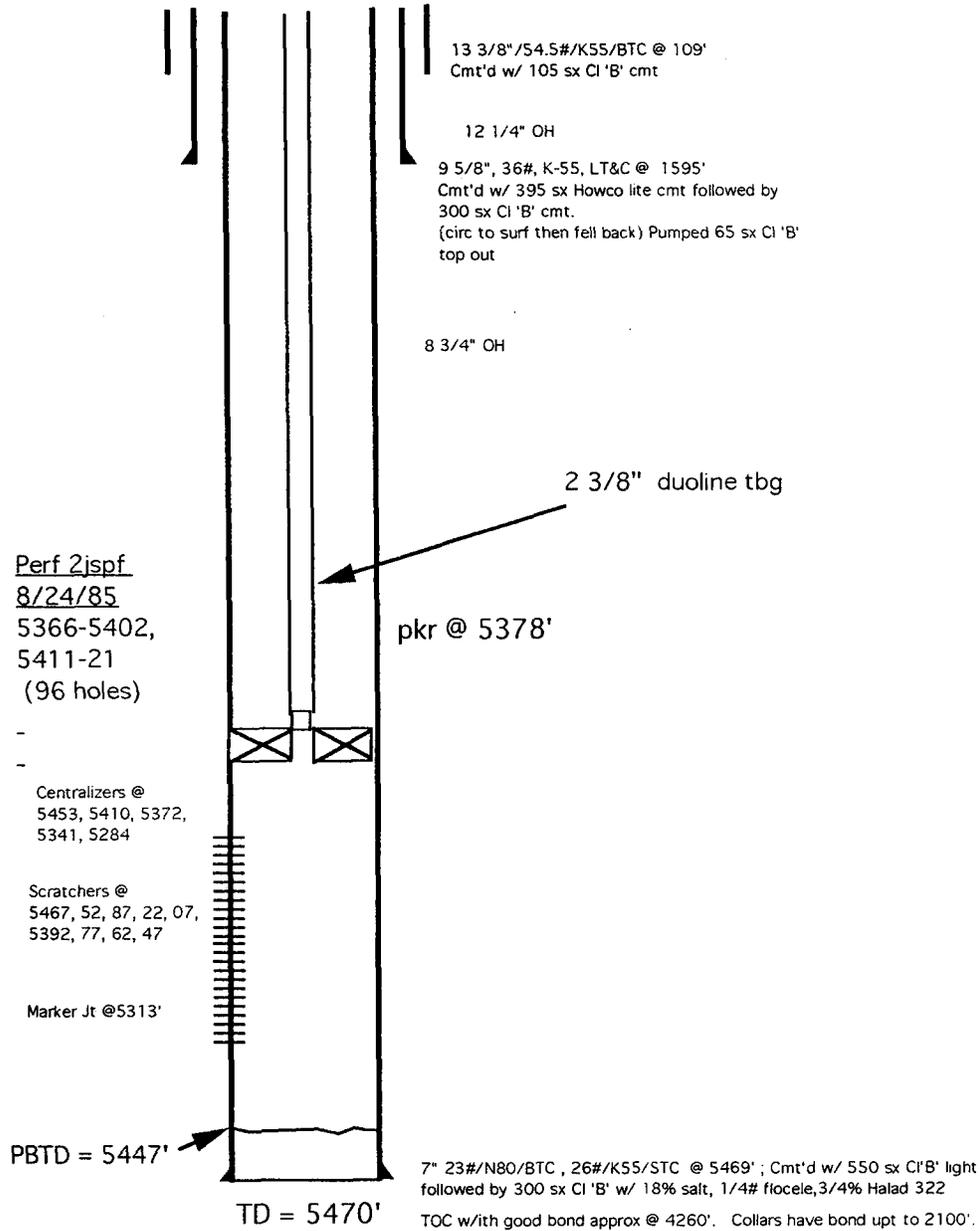
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

# PRESENT CONDITION

## Ratherford Unit, WELL #12-24

775' FSL & 1980' FWL of  
 Section 12, T41S, R23E  
 San Juan County, Utah  
 Greater Aneth Field  
 API #: 43-037-31151  
 GL Elev: 4599'  
 RKB Elev: 5611'  
 Spud Date: 8/10/85



Casing (btm to top)  
 7" / 26# / K55 / STC - 1148'  
 7" / 23# / K55 / STC - 4047'  
 7" / XO STC X BTC - 45'  
 7" / 23# / N80 / BTC - 234'

# PROPOSED CONDITION

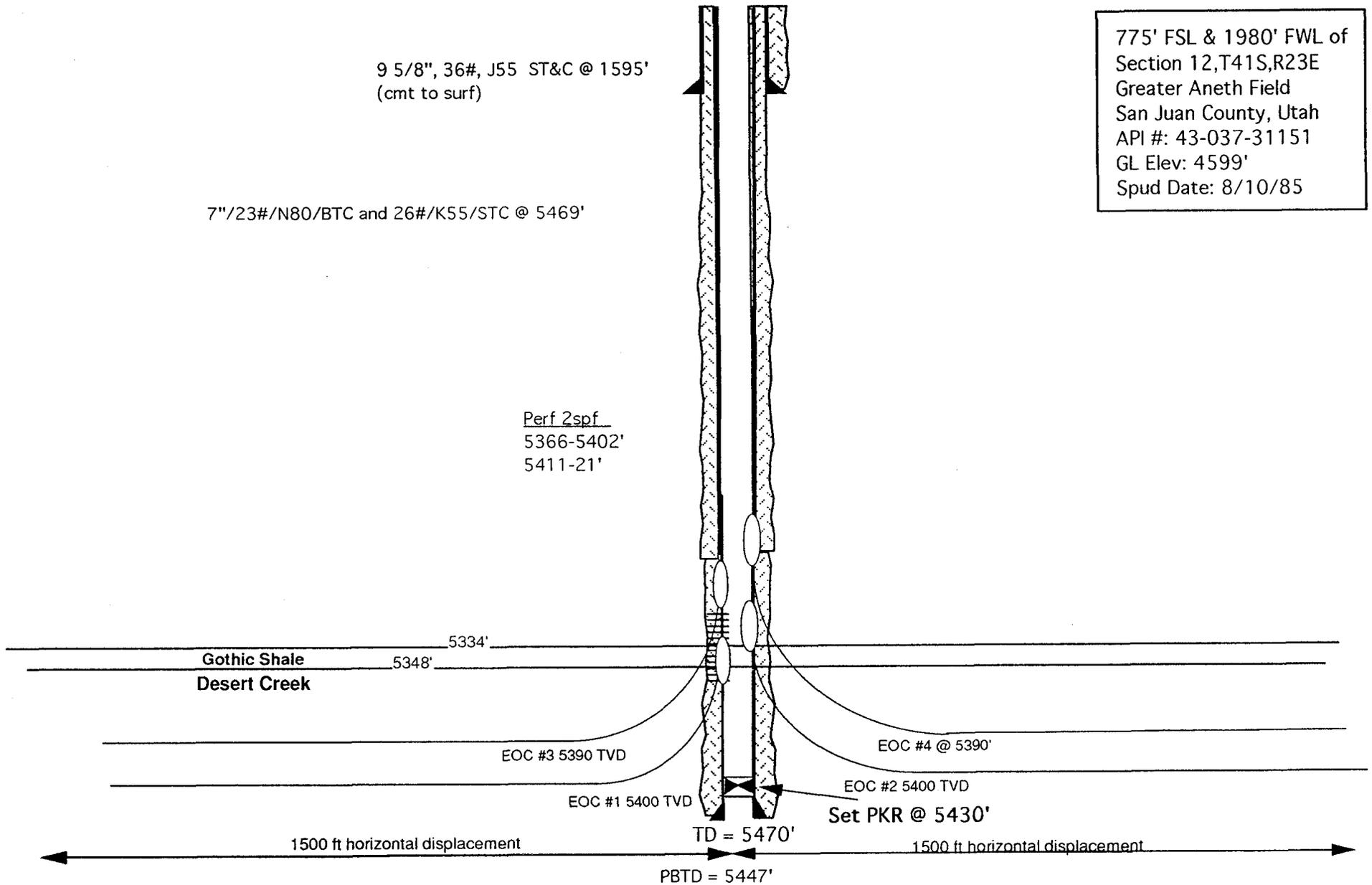
## Ratherford Unit #12-24

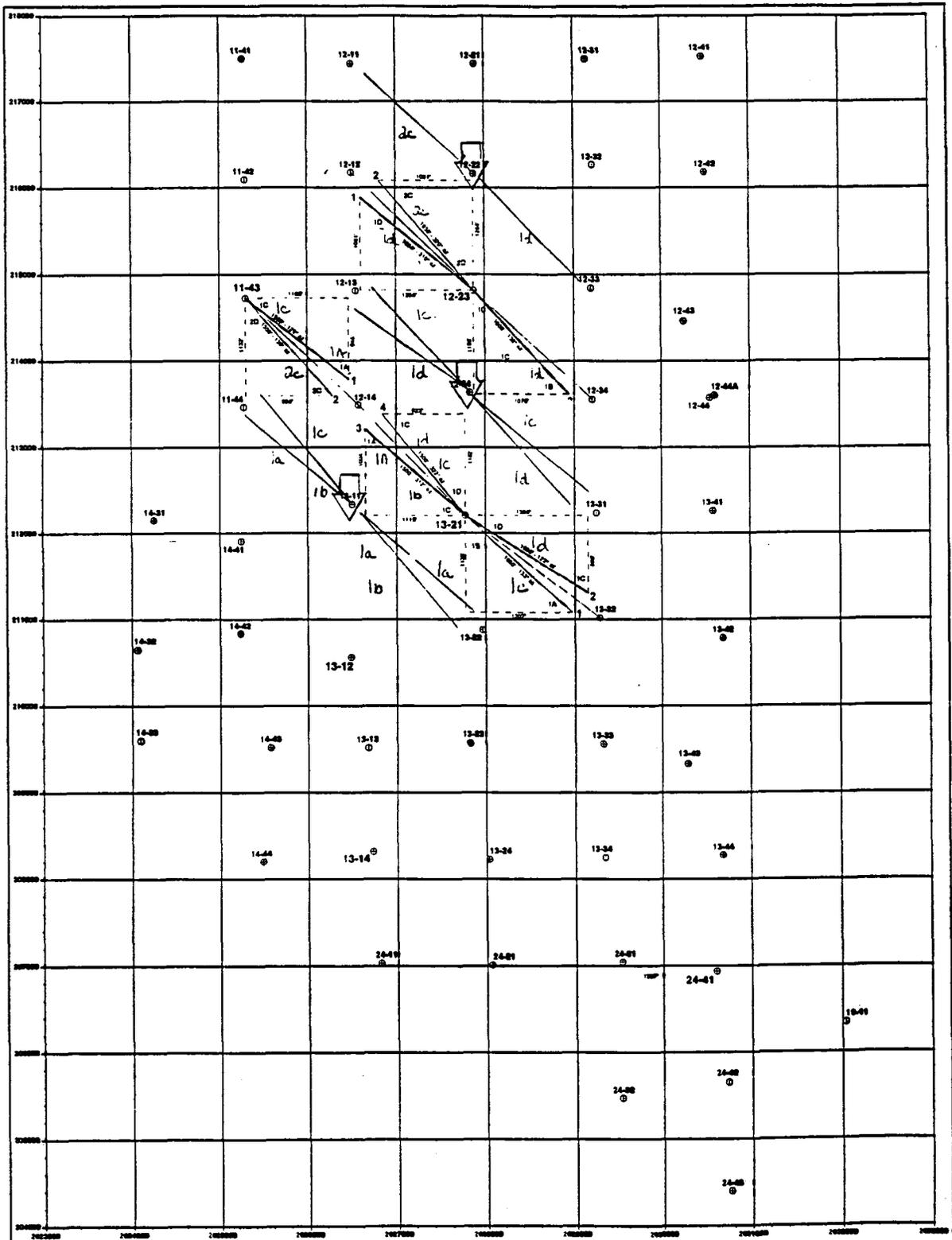
775' FSL & 1980' FWL of  
 Section 12, T41S, R23E  
 Greater Aneth Field  
 San Juan County, Utah  
 API #: 43-037-31151  
 GL Elev: 4599'  
 Spud Date: 8/10/85

9 5/8", 36#, J55 ST&C @ 1595'  
 (cmt to surf)

7"/23#/N80/BTC and 26#/K55/STC @ 5469'

Perf 2spf  
 5366-5402'  
 5411-21'





PROPOSED HORIZONTAL  
INJECTOR

Mobil Exploration & Producing U.S. Inc.  
**Light OI/EOR**  
Midland, Texas

**Ratherford Unit**  
San Juan County, Utah

1998 Horizontal Producer Program



## Ratherford Unit Well #12-24 Multilateral Horizontal Drilling Procedure

The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and **drill multiple short radius horizontal laterals** (1300-1500 ft).

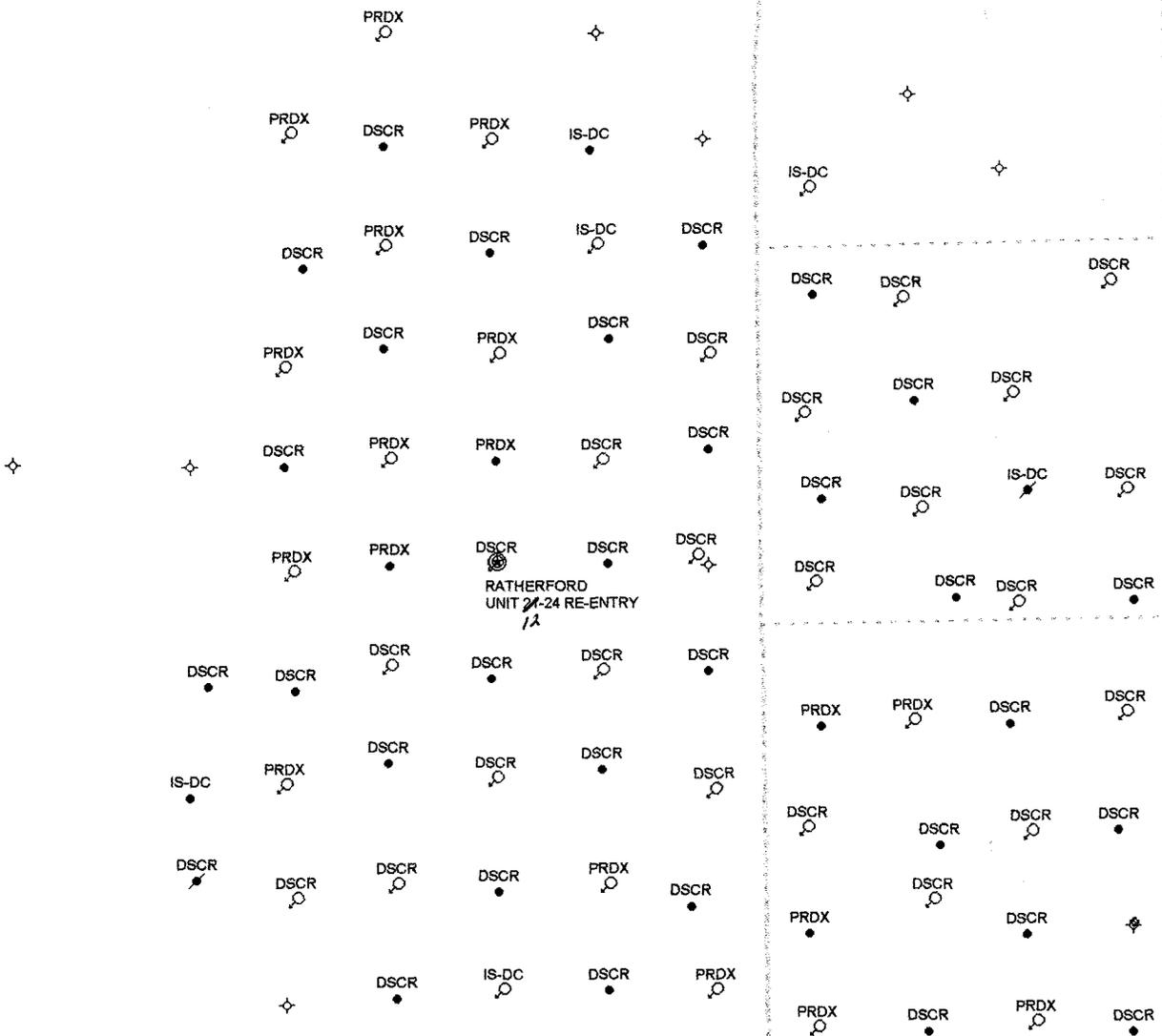
1. Prepare location and dig working pit.
2. MIRU WSU, reverse unit, and H<sub>2</sub>S equipment. Bullhead kill weight fluid down tubing.
3. Release packer, and pick up on wellhead to remove. ND wellhead and NU BOP's.
4. Continue to POH with tubing.
5. TIH with full gauge bit and casing scraper to PBTD. TOH with bit and scraper.
6. Ensure well will circulate, and set RTBP above perfs.
7. RDMO WSU.
8. MIRU 24 hr WSU.
9. PU tubing, drill collars, and drill pipe in derrick and run in hole. Then POH and stand back.
10. RU wireline company and run gauge ring for casing down to packer setting depth.
11. Run packer on wireline and set using GR/CCL log to correlate with. RD wireline.
12. PU drillpipe with UBHO sub and latch assembly.
13. Latch into packer. Run gyro and obtain orientation of keyway on packer.
14. POH w/ gyro. POH w/ drill pipe and RIH w/ whipstock oriented on the surface for window azimuth desired.
15. Shear pilot mill bolt and start milling window.
16. POH and PU window mill and watermelon mill to finish window and drill 3 ft of formation.
17. POH w/ mills and RBIH w/ new mills to clean up window.
18. PU drill pipe and directional motors to drill curve. Use the gyro to drill until the inclination dictates that the gyro must be pulled.
19. Pull five stand of drill pipe and run steering tool to finish drilling the curve.
20. POH once curve is finished and PU lateral motor to drill the lateral using MWD.
21. Once lateral TD is reached, POH w/ directional equipment.

22. RIH w/ hook and retrieve whipstock.
23. PU new whipstock with extension in body for next window and orient on surface to desired azimuth.
24. Repeat steps 15-23, for each successive planned lateral.

OPERATOR: MOBIL EXPL & PROD  
FIELD: GREATER ANETH (365)  
SEC, TWP, RNG: 12, T41S R23E  
COUNTY: SAN JUAN  
UAC: R649-2-3

GREATER ANETH FIELD

T41S R23E



PREPARED:  
DATE: 25-SEPT-96

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 09/24/96

API NO. ASSIGNED: 43-037-31151

WELL NAME: RATHERFORD 12-24 MULTI-LEG  
 OPERATOR: MOBIL EXPL & PROD US INC (N7370)

PROPOSED LOCATION:  
 SESW 12 - T41S - R23E  
 SURFACE: 0775-FSL-1980-FWL  
 BOTTOM: 0682-FNL-2855-FWL  
 SAN JUAN COUNTY  
 GREATER ANETH FIELD (365)

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: IND  
 LEASE NUMBER: 14-20-603-246A

PROPOSED PRODUCING FORMATION: DSCR

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Federal  State  Fee   
 (Number \_\_\_\_\_)
- Potash (Y/N)
- Oil shale (Y/N)
- Water permit  
 (Number \_\_\_\_\_)
- RDCC Review (Y/N)  
 (Date: \_\_\_\_\_)

LOCATION AND SITING:

- R649-2-3. Unit: RATHERFORD GREATER ANETH
- R649-3-2. General.
- R649-3-3. Exception.
- Drilling Unit.  
 Board Cause no: \_\_\_\_\_  
 Date: \_\_\_\_\_

COMMENTS:

STIPULATIONS:



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
James W. Carter  
Division Director

1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

September 26, 1996

Mobil Exporation & Producing  
P.O. Box 633  
Midland, Texas 79702

Re: Ratherford 12-24 (Re-entry) Well, 775' FSL, 1980' FWL,  
SE SW, Sec. 12, T. 41 S., R. 23 E., San Juan County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-037-31151.

Sincerely,

  
for R. J. Firth  
Associate Director

lwp

Enclosures

cc: San Juan County Assessor  
Bureau of Land Management, Moab District Office





DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL EXPLORATION

Well Name: RATHERFORD UNIT 12-24 (RE-ENTRY)

Api No. 43-037-31151

Section 12 Township 41S Range 23E County SAN JUAN

Drilling Contractor \_\_\_\_\_

Rig #: \_\_\_\_\_

SPUDDED:

Date: 11/11/96

Time: \_\_\_\_\_

How: ROTARY

Drilling will commence: \_\_\_\_\_

Reported by: BENNY BRIGGS

Telephone #: 1-801-651-3473

Date: 11/14/96 Signed: JLT

DIVISION OF OIL, GAS AND MINING  
 ENTITY ACTION FORM - FORM 6

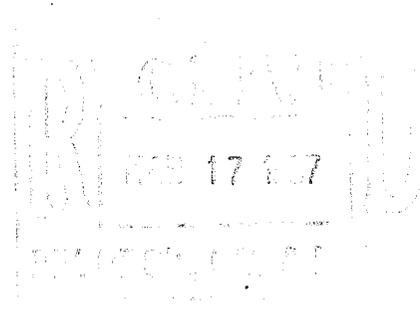
OPERATOR MOBIL EXPLORATION & PRODUCING TX & NM, INC.  
 ADDRESS P. O. BOX 633  
MIDLAND, TEXAS 79702

OPERATOR ACCT. NO. H 7370

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
B	99999	06280	43-037-31151	RATHERFORD 12-24		12	41S	23E	SAN JUAN	10-9-96	2-27-1997
WELL 1 COMMENTS: Entity added 3-17-97. <i>Lee</i>											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

- ACTION CODES (See Instructions on back of form)
- A - Establish new entity for new well (single well only)
  - B - Add new well to existing entity (group or unit well)
  - C - Re-assign well from one existing entity to another existing entity
  - D - Re-assign well from one existing entity to a new entity
  - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.  
 (3/89)



*Shirley Houchins*  
 Signature SHIRLEY HOUCHINS  
 ENV. & REG. TECH  
 Title  
 Date 2-27-97  
 Phone No. (915) 688-2585

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT - " for such proposals

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

5. Lease Designation and Serial No.

14-20-603-246A

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation  
RATHERFORD UNIT

8. Well Name and No.

RATHERFORD 12-W-24

9. API Well No.

43-037-31151

10. Field and Pool, or exploratory Area  
GREATER ANETH

11. County or Parish, State

SAN JUAN UT

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well  Gas Well  Other SIDETRACK

2. Name of Operator Mobil Exploration & Producing U.S. Inc.  
as Agent for Mobil Producing TX & NM Inc.

3. Address and Telephone No.  
P.O. Box 633, Midland, TX 79702 915-688-2585

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
775' FSL & 1980 FWL  
SEC.12, T41S, R23E

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other SIDETRACK
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

LEG #1A1-BOTTOM HOLE LOCATION: 105' SOUTH & 55' EAST FROM SURFACE SPOT (ZONE 1d)  
LEG #1A1(1S1)-BOTTOM HOLE LOCATION: 502' SOUTH & 354' EAST FROM SURFACE SPOT.  
LEG #2A1-BOTTOM HOLE LOCATION: 608' NORTH & 801' WEST FROM SURFACE SPOT (ZONE 1d)  
LEG #3A1-BOTTOM HOLE LOCATION: 992' SOUTH & 756' EAST FROM SURFACE SPOT (ZONE 1c)  
LEG #4A1-BOTTOM HOLE LOCATION: 790' NORTH & 1215' EAST FROM SURFACE SPOT (ZONE 1c-1a)

SEE ATTACHMENT.

02-28-97

14. I hereby certify that the foregoing is true and correct

Signed Shirley Houchens Title ENV. & REG. TECHNICIAN Date 02-28-97

(This space for Federal or State office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_  
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NO tax credit 7/98

\* See Instruction on Reverse Side

**ATTACHMENT - FORM 3160-5**  
**RATHERFORD UNIT - WELL #12-24**  
**14-20-603-246A**  
**NAVAJO TRIBAL**  
**SAN JUAN, UTAH**

10-09-96 SITP 1200# SICP 200# RU WELL TO FLOW BACK TO STEEL TANK, DIG  
W/O PIT, REL PKR, RU TONGS FOR CMT LINED TBG, SECURE WELL

10-10-96 FINISH LAYING DOWN 2 7/8" CMT LINED TBG, MOVE IN FRAC TANK  
WO/TRUCK/LOG.

10-11-96 SITP 500#, MIRU SCHLUMBERGER, RIH W/METT & GR/COMPENSATED  
NEUTRON LOG FROM 5437-4355', RD SCHLUMBERGER, ND EXISTING  
WELLHEAD, NU NEW WELLHEAD. RD PU & MOVE OFF, BACKFLOW DAILY  
TO RELIEVE PRESSURE WO/UNIT.

11-10-96 ROAD UNIT & EQUIPMENT TO LOCATION, (NEW RIG #25) 75% RIGGED UP.

11-11-96 FINISH RU UNIT, SET MUD GAS SEPERATOR/WO/TIW WL SET PKR.

11-12-96 RAN GYRO FINDER SURVEY/DIRECTION OF PKR @ 209 DEG. AZ. RIH WITH  
WHIPSTOCK AND STARTING MILL. STATE OF UTAH, NOTIFIED 11-11-96.

11-13-96 RIH, SET WHIPSTOCK IN PKR @ 5348, SLIDE SET, MILL FROM 5325-  
5326, MILL WINDOW 5325-5333'.

11-14-96 CONTINUE W/WINDOW & WATERMELON MILLS, AND DRILL FORMATION FROM  
5333-5336, PUMP SWEEP & CIRC CLEAN. (1P1). RIH W/SPERRY-SUN MOTOR,  
RIH W/GYRO, TIME DRILL CURVE (1A1) FROM 5336-5338'.

11-15-96 CONTINUE DRILLING CURVE 1A1 TO 5396'.

11-16-96 RUN DIRECTIONAL SURVEY, WASH & REAM BOTTOM OF WINDOW @ 5333-5396'  
CONTINUE CURVE (1A1) TO 5408'.

11-17-96 CONTINUE CURVE (1A1) TO 5421'.

11-18-96 CONTINUE CURVE (1A1) TO 5449'. TIH W/LATERAL MOTOR (1A1) DRILL  
(1A1) TO 5526'.

11-19-96 DRILL TO 5589', NOT BUILDING ENOUGH ANGLE, POH, SPOT SAND PLUG  
FROM 5589-5370', CIRC OUT, RIH W/45' OF 3" BAILER TO SET CEMENT  
PLUG FROM 5370-5350'.

11-20-96 FINISH DUMPING 20' CMT, TAG SOFT CMT @ 5350', HARD CMT @ 5360',  
TIME DRILL FROM 5360-5392.

11-21-96 CONTINUE OUT OF HOLE W/BHA TO DIR TOOLS. RUN IN LATERAL C/O SAND  
& SPOT CMT. PLUG. RU TO RESERVE CIRC. C/O SAND FROM 5392'-END OF  
LATERAL @ 5589' & CIRC CLEAN. RU HOWCO. PUMP 5 BBLs. FW AHEAD,  
FOLLOW BY 4.3 BBLs 17# CMT. SLURRY W/ADD. DISPLACE W/24 BBLs. FW.  
CMT. FROM 5589-5370'. POOH SLOWLY TO 5370', WOC (12 HRS). ATTEMPT  
TO KICKOFF.

11-22-96 TIH TO 5200', CONTINUE IN HOLE TO 5390, DECISION TO WOC (4HRS),  
RIH TAG HARD CMT @ 5406' W/5000# WT. TIME DRILL FROM 5406-5417.5  
(KICKED OFF).

11-23-96 RIH W/3 5/8" 3 DEGREE ART. MOTOR & BHA TO 5200'. RIH W/STEERING  
TOOL, CONTINUE IN HOLE TO KICKOFF POINT. REAM, ORIENT DRILL &  
WORK HOLE 5406-5425'.

11-24-96 CONT. ORIENTED DRILL, SURVEYS & WORK HOLE TO 5443'. (LAST SURVEY  
@ 5422' W/STEERING TOOL/58.60 DEGREE, 123.40 ANGLE/TVD @5409.01).  
PU SWIVEL & WORK BIT TO END OF CURVE @ 5443'. ORIENTED DRLG. &  
SURVEYS FROM 5443-5461'. (LAST SURVEY W/MWD @5425', TVD 5409.85.

11-25-96 SLIDE DRILL CURVE 1A1 F/5461-5466', SIDE TRACKED OLD BETWEEN  
5428-5435. OLD HOLE 5437' MD, 74.9 DEG. ANGLE, 117 DEG AZ.  
REAMED & DRILL F/5443-5458', IN UPPER HOLE REAMING & DRILLING.  
PULLED BACK & ORIENT IN NEW LOWER HOLE & SLIDE DRILL CURVE  
1A1 FROM 5467-5490'.

11-26-96 DRILLED CURVE 1A1 F/5490-5499/SLIDE DRILL LATERAL 1A1 F/5499-5562'

11-27-96 SLIDE DRILL LATERAL 1A1 FROM 5562-5750'

11-28-96 SLIDE DRILL & ROTATE DRILL LATERAL 1A1 F/5750-5890'.

11-29-96 CONT. SLIDE DRILL & ROTATE DRILL LATERAL 1A1 TO 5961'.

ATTACHMENT - FORM 3160-5  
RATHERFORD UNIT - WELL #12-24  
14-20-603-246A  
NAVAJO TRIBAL  
SAN JUAN, UTAH  
PAGE 2

11-30-96 RIH W/2.875" AOHPD, REAM TO TURN TOOL TO 180 DEG., TIME DRILL F/5472-5622', FELL IN OLD HOLE @ 5622', RIH TO 5655', REAMED THRU @ 180 DEG. F/5550-5582, TIME DRILL F/5582-5598', UNABLE TO GET KICKOFF IN DRILL BREAK F/5581-5596'. UNABLE TO SIDETRACK. RIH W/MUD MOTOR TO 5961, SLIDE DRILL 5961-5962 UNABLE TO GET WT TO BIT. ROTATE & REAMED LATERAL 1A1 FROM 5940-5962'.

12-01-96 SLIDE & ROTATE LATERAL 1A1 F/5962-6020'

12-02-96 DRILL LATERAL 1A1 F/6020-6038', PULL UP /PREPARE TO ORIENT DRILL.

12-03-96 CONT. ORIENT DRILL & SURVEY F/6038-6114'. ATTEMPT TO ROTATE DRILL (ROLL) @ 6100'. UNABLE TO ROTATE.

12-04-96 CONT. TO ORIENT DRILL F/6114-6118'. PROJECTED SURVEY AT 6118' TD, 90 DEG. ANGLE, 159 AZ., 5426' TVD., VS 613'. DECISION/LATERAL #2.

12-05-96 TIH W/WHIPSTOCK #2, SHEARED BOLT, WO/RETRIEVING TOOL, RETRIEVE WHIPSTOCK, LATCH WHIPSTOCK, W/ON ORDERS & WIRELINE.

12-06-96 RU WL, WHIPSTOCK SET W/308 AZ., 10,000# PULL, TOO H W/RETRIEVING TOOL, RIH TO 5300', RU POWER SWIVEL, MILL WINDOW F/5308+ TO 5310' CIRC./TOOH W/STARTING MILL, TIH W/WINDOW & WATERMELON MILL, MILL WINDOW FROM 5308-5313'.

12-07-96 CONT. MILL WINDOW TO 5320' (5312-5320' CORRECTED DEPTH) AND FORMATION TO 5321+. CIRC CLEAN. FINAL REPORT FOR IND. PREP. FOR LATERAL #2.

12-07-96 TIME & ORIENT DRILL FROM 5321-5343'. SURVEY @ 5307/BIT @ 5334', WINDOW FROM 5312-5320' (CURVE SECTION ON LATERAL 2A1).

12-08-96 ORIENT DRILL F/5340-5391' LATERAL 2A1 CURVE.

12-09-96 POH W/CURVE DRILL ASSM., RIH, SLIDE DRILL LATERAL 2A1 F/5391-5622'

12-10-96 CONT. SLIDE & ROTATE DRILL LATERAL 2A1 F/5622-5760'

12-11-96 CONT. SLIDE & ROTATE DRILL LATERAL 2A1 F/5760-5823', SLIDE DRILL HIGH SIDE FROM 5823-5833'.

12-12-96 CONT. SLIDE & ROTATE & SURVEY LATERAL 2A1 F/5833-5985'. IN POROSITY @ 5845 MD-5414.68 TVD. OUT POROSITY @ 5880 MD-5411.48 TVD

12-13-96 SLIDE & ROTATE DRILL LATERAL 2A1 F/5985-6034'.

12-14-96 SLIDE DRILL LATERAL 2A1 F/6034-6146'.

12-15-96 SLIDE DRILL LATERAL 2A1 F/6146-6156' (REAMED HOLE F/6126-6156'), SLIDE DRILL LATERAL 2A1 F/6156-6184'

12-16-96 ORIENT DRILL & SURVEYS ON LATERAL 2A1 6185-6244'.

12-17-96 ORIENT DRILL & SURVEY 6244-6311' (TVD 5418) LATERAL 2A1. RETRIEVE WHIPSTOCK #2, PREPARE TO DRILL LATERAL #3.

12-18-96 FINISH OUT OF HOLE, LAY DOWN BHA. WHIPSTOCK RETRIEVED, MAKE UP EXTENSION AND WHIPSTOCK #3.

12-19-96 FINISH IN HOLE W/WHIPSTOCK #3, LATCH IN PKR @ 5350', START MILLING AT 5276' TO 5278', CIRC. SWEEP, POH W/STARTING MILL, PU WINDOW MILL & WATERMELON MILL, START MILLING WINDOW FROM 5276'-5284'.

12-20-96 CONTINUE TO MILL ON WINDOW (5276-5285). PREPARE TO PU CURVE, FINAL REPORT FOR LATERAL #3.

12-20-96 TIH W/CURVE BLDG BHA TO DRILL CURVE SECTION 3A1, PU SWIVEL & TAG @ 5285', RIG UP K-JET WL & RAN GYRO & ORIENT TOOL FACE. TIME & ORIENT DRILL FROM 5285-5286'.

12-21-96 TIME DRILL FROM 5288-5311, SURVEY, PULL GYRO, RIH W/STEERING TOOL, BACK IN HOLE W/BIT, ORIENT DRLG & SURVEY FROM 5311-5336.

12-22-96 CONTINUE TO ORIENT DRLG & SURVEY FROM 5336-5445'

12-23-96 CONTINUE TO ORIENT DRLG & SURVEY LATERAL #3A1 FROM 5445-5917'.

12-24-96 CONTINUE TO ORIENT DRLG, ROTATE DRILL & SURVEY FROM 5917-6150'.

12-25-96 CONTINUE TO ORIENT DRLG, ROTATE DRILL & SURVEY FROM 6150-6350'.

ATTACHMENT - FORM 3160-5  
RATHERFORD UNIT - WELL #12-24  
14-20-603-246A  
NAVAJO TRIBAL  
SAN JUAN, UTAH  
PAGE 3

12-26-96 SLIDE & ROTATE DRILL LATERAL 3A1 FROM 6350-6650, LAST SURVEY @ 6609 MD, 89 DEG. ANGLE, 133.90 AZ, TVD 5403.12, VS 1152'.  
12-27-96 SLIDE & ROTATE DRILLED LATERAL 3A1 FROM 6650-6703, POH, LD WHIPSTOCK, DC'S & KEYWAY, FINAL REPORT LATERAL #3A1.  
12-28-97 RIH W/3 DEG WHIPSTOCK, SETTING TOOL, PKR @ 5350, TOP OF WHIPSTOCK @ 5261. RIH W/STARTER MILL, WINDOW & WATERMELLON MILL. MILL WINDOW FROM 5264-5272 & FORMATION TO 5274, PUMP SWEEP & CIRC HOLE CLEAN, POH W/MILLS, FINAL REPORT LATERAL 4 PREP.  
12-29-97 RIH, WARM UP GYRO & CHECK DRIFT, TIME DRILL CURVE 4A1 FROM 5279-5295, RIH W/GYRO, SURVEY @ 5273.3 DEG ANGLE, AZ 310, POH.  
12-30-96 RIH W/STEERING TOOL, DRILL CURVE 4A1 FROM 5295-5472', CIRC UP SAMPLES, POH W/STEERING TOOL, POH W/CURVE DRILLING ASSEMBLY.  
12-31-96 TIH W/LATERAL MOTOR ASSEMBLY, PU SWIVEL & ORIENT TOOL FAC, DRIL LATERAL 4A1 SECTION FROM 5472-5630', SLIDE & ROTATE.  
01-01-97 DRILL AHEAD ON LATERAL #4, SLIDING & ROTATING, DRILL F/5630-5819'.  
01-02-97 DRILL AHEAD F/5819-6000'.  
01-03-97 DRILL AHEAD F/6000-6075', FINISH TIH & BEGIN ORIENT TOOLS.  
01-04-97 FINISH ORIENT TOOLS, DRILL AHEAD F/6075-6435' MD.  
01-05-97 DIRECTIONAL DRILL, LATERAL #4 FROM 6435-6735'TD.  
01-06-97 FINISH POH, RUN RETRIEVAL BRIDGE PLUG, SET @ 3970', POH, CLEAN MUD PITS, RELEASE RIG AT 04:00, FINAL REPORT, TURN WELL TO COMPLETION.

COMPLETION

01-09-97 RIG UP, ND WELLHEAD & NU HYD BOP., RIH W/RET. HEAD, CAUGHT & REL RBP @ 3970', POH W/7" RBP. SDFN.  
01-10-97 RIH W/PKR, SET EOT @ 5494', PKR @ 5125', LOAD CSG W/30 BBLs 10# BRINE & PRESS TESTED TO 500#, OK.  
01-21-97 MIRU DOWELL CT UNIT, RIH W/TBG TO 6735', ACIDIZE LATERAL 4A1 W/20,000 GALS, 15% HCL ACID, FROM 5500' TO 6735', RDMO DOWELL CT UNIT.  
01-22-97 WELL SHUT IN, RIG DOWN DOWELL.  
01-23-97 POOH W/WHIPSTOCK, REPAIRS  
01-24-97 RIH W/WHIPSTOCK. SET 7" PKR 5125', RIGGING UP DOWELL.  
01-25-97 ACIDIZE LATERAL #3A1 W/20,000 GALS 15% HCL, (5550-6704') RD DOWELL.  
01-26-97 3 HR SITP 600#, FLOW BACK APPX 500 BLW, FULL OPEN CHOKE @ 100 PSI.  
01-27-97 MU & ORIENT WPSTK, RIH & SET, POOH PKR, SN, TBG, SET EOT @ 5500, PKR @5125. TEST TO 500#, OK.  
01-28-97 MIRU DOWELL CT UNIT, ACIDIZE LAT 1A1 W/8000 GALS 15% HCL @ 1 BPM F/6000' TO 5550' MD., RDMO DOWELL, SWI FOR 3 HRS, PREP TO FLOW BACK.  
01-29-97 3 HR SITP 300 PSI, FLOW WELL, 3/4" CHOKE @ 40 PSI., UNSET PKR, POOH, W/WHIPSTOCK, PU 13' EXT. ADD TO WHIPSTOCK/PREPARE TO ACIDIZE LATERAL #2.  
01-30-97 ORIENT WHIPSTOCK, RIH & SET FOR LATERAL #2A1. TAG UP @ 6311', MD OF LATERAL #2A1. READY TO ACIDIZE

ATTACHMENT - FORM 3160-5  
RATHERFORD UNIT - WELL #12-24  
14-20-603-246A  
NAVAJO TRIBAL  
SAN JUAN, UTAH  
PAGE 4

01-31-97 MIRU DOWELL, ACIDIZE LATERAL #2A1, @ 6311 TO 6290' W/400 GAL 15%  
HCL, SET PKR @ 4676', ACIDIZE 5876-5610' W/3600 GALS 15%, RDMO  
DOWELL, UNSET PKR, SWIFN.

02-01-97 RIH W/RETRIEVING HEAD, LATCH ONTO WHIPSTOCK, POOH LAYING DOWN  
2 7/8" WS, PH6 & WHIPSTOCK, SWIFN & SUNDAY.

02-03-97 RIH W/WL REENTRY GUIDE, REPAIR TUBING, WO/SETTING PKR @ 5200.

02-04-97 FINISH IN HOLE W/2 7/8" TBG TO 5209.98', NIPPLE DOWN BOPE, SET PKR  
@ 5202.53, CIRC PKR FLUID, TEST PACKER TO 1020 PSI, NIPPLE UP TREE  
& TEST, OK. RIG DOWN, MOVE OFF, FINAL COMPLETION REPORT, WELL TURN  
TO PRODUCTION.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE\*

(See other instructions on reverse side)

FORM APPROVED  
OMB NO. 1004-0137  
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other INJECTOR  
b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other SIDETRACK  
2. NAME OF OPERATOR Mobil Exploration & Producing U.S. Inc.  
as Agent for Mobil Producing TX & NM Inc.

5. LEASE DESIGNATION AND SERIAL NO.  
14-20-603-246A  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
NAVAJO TRIBAL  
7. UNIT AGREEMENT NAME  
RATHERFORD UNIT  
8. FARM OR LEASE NAME, WELL NO.  
RATHERFORD 12-W-24  
9. API WELL NO.  
43-037-31151  
10. FIELD AND POOL, OR WILDCAT  
GREATER ANETH  
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
SEC. 12, T41S, R23E

3. ADDRESS AND TELEPHONE NO.  
P.O. Box 633, Midland, TX 79702 (915) 688-2585

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface  
775' FSL & 1980' FWL  
At top prod. interval reported below  
At total depth  
\* #37

14. PERMIT NO. DATE ISSUED  
12. COUNTY OR PARISH  
SAN JUAN  
13. STATE  
UTAH

15. DATE SPUDED 11-12-96  
16. DATE T.D. REACHED 1-6-1997  
17. DATE COMPL. (Ready to prod.) 02-04-97  
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 4599' GR  
19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD \* #37  
21. PLUG, BACK T.D., MD & TVD \* #37  
22. IF MULTIPLE COMPL., HOW MANY\*  
23. INTERVALS DRILLED BY X ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)\*  
LATERAL #1S1 - 5383-6118 TMD, LATERAL #2A1 - 5320-6311 TMD  
LATERAL #3A1 - 5276-6703 TMD, LATERAL #4A1 - 5264-6735' TMD  
DSCR per BHH  
25. WAS DIRECTIONAL SURVEY MADE  
YES

26. TYPE ELECTRIC AND OTHER LOGS RUN  
27. WAS WELL CORED  
NO

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8"	54.5#	109'	---	SURFACE	ORIGINAL
9 5/8"	36#	1595'	12 1/4	SURFACE	CASING
7"	23#	5469'	8 3/4	4260'	UNDISTURBED

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 7/8	5210'	5203'

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	5210'	5203'

31. PERFORATION RECORD (Interval, size and number)

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5370-5350'	SET CEMENT PLUG, 20' CMT
5406-5417'	TAG CMT, TIME DRILL, KICKOFF
** #37	

33.\* PRODUCTION

DATE FIRST PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) WELL STATUS (Producing or shut-in)

DATE OF TEST 2-24-97 HOURS TESTED 24 CHOKE SIZE OPEN CHOKE PROD'N. FOR TEST PERIOD 1200 BWIPP  
FLOW. TUBING PRESS. 2850 CASING PRESSURE OPEN CHOKE CALCULATED 24-HOUR RATE 1200 BWIPP OIL - BBL. GAS - MCF. WATER - BBL. OIL GRAVITY - API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY

35. LIST OF ATTACHMENTS  
DIRECTIONAL SURVEY REPORT

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records  
SIGNED Shuley Houchins TITLE ENV. & REG. TECHNICIAN DATE 2-27-1997

\*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38.

GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
* #20 & #21			LATERAL 1S1 (5383-6118' TMD)(5187-5426 TVD)			
			LATERAL 1A1 (5425-5559' TMD)(5409-5438') TVD			
			LATERAL 2A1 (5320-6311' TMD)(5318-5418' TVD)			
			LATERAL 3A1 (5276-6703' TMD)(5275-5402' TVD)			
			LATERAL 4A1 (5264-6735' TMD)(5263-5395' TVD)			
** #32	5500'	6735' TMD	LATERAL #4A1, ACIDIZE W/20,000 GALS 15% HCL.			
	5550'	6704' TMD	LATERAL #3A1, ACIDIZE W/20,000 GALS 15% HCL			
	5550'	6000' TMD	LATERAL #1S1, ACIDIZE W/8,000 GALS 15% HCL			
	5610'	6311' TMD	LATERAL #2A1, ACIDIZE W/4,000 GALS 15% HCL.			

# Sperry-Sun Drilling Services

RU 12-24 - leg 1ST



Ratherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5383.00	26.900	128.600	5187.41	773.99 S	969.55 E	1191.26	
5387.00	30.600	121.000	5383.60	53.25 N	45.16 W	-69.54	129.872
5395.00	38.100	119.200	5390.20	50.99 N	41.25 W	-65.45	94.597
5400.00	42.300	123.400	5394.02	49.31 N	38.50 W	-62.49	99.940
5405.00	41.800	112.000	5397.73	47.76 N	35.55 W	-59.52	152.896
5415.00	52.600	108.800	5404.52	45.23 N	28.68 W	-53.49	110.496
5425.00	62.900	114.400	5409.85	42.10 N	20.84 W	-46.41	113.306
5435.00	65.700	115.000	5414.19	38.33 N	12.65 W	-38.62	28.517
5443.00	66.500	115.000	5417.43	35.24 N	6.02 W	-32.27	10.000
5448.00	67.200	115.000	5419.40	33.30 N	1.86 W	-28.28	14.000
5458.00	68.500	115.000	5423.17	29.38 N	6.54 E	-20.25	13.000
5467.00	71.600	115.000	5426.24	25.81 N	14.21 E	-12.91	34.444
5470.00	74.400	118.500	5427.11	24.52 N	16.77 E	-10.38	145.448
5475.00	79.200	118.500	5428.25	22.19 N	21.04 E	-6.01	96.000
5479.00	83.000	118.500	5428.87	20.31 N	24.52 E	-2.47	95.000
5485.00	89.200	113.800	5429.28	17.67 N	29.88 E	2.78	129.535
5495.00	97.000	117.100	5428.74	13.39 N	38.89 E	11.47	84.665
5499.00	98.600	118.700	5428.20	11.53 N	42.40 E	15.00	56.306
5525.99	98.300	122.500	5424.23	2.05 S	65.37 E	39.35	13.971
5541.00	99.100	125.000	5421.96	10.30 S	77.71 E	53.19	17.305
5557.77	99.000	127.600	5419.32	20.10 S	91.05 E	68.89	15.322
5573.00	97.000	130.100	5417.20	29.56 S	102.80 E	83.39	20.896
5588.83	94.600	131.300	5415.60	39.83 S	114.73 E	98.67	16.933
5620.67	91.200	134.500	5413.99	61.47 S	138.02 E	129.77	14.654
5652.57	88.500	137.400	5414.07	84.39 S	160.20 E	161.28	12.420
5684.40	86.800	140.300	5415.38	108.34 S	181.12 E	192.91	10.554
5716.15	88.300	144.100	5416.74	133.40 S	200.56 E	224.59	12.857
5747.30	89.700	148.700	5417.28	159.33 S	217.79 E	255.72	15.434
5778.25	87.300	149.600	5418.09	185.89 S	233.65 E	286.56	8.281
5809.96	90.100	152.700	5418.81	213.65 S	248.95 E	318.06	13.171
5840.72	92.800	156.100	5418.03	241.38 S	262.23 E	348.38	14.111
5872.54	93.500	156.100	5416.28	270.42 S	275.10 E	379.54	2.200
5903.38	91.000	159.400	5415.07	298.94 S	286.77 E	409.56	13.417
5928.00	89.600	162.600	5414.94	322.21 S	294.78 E	433.20	14.187
5938.49	88.300	162.400	5415.14	332.22 S	297.93 E	443.20	12.538
5954.00	85.400	162.800	5415.99	346.99 S	302.57 E	457.94	18.874
5970.26	85.300	162.800	5417.31	362.47 S	307.36 E	473.35	0.615
6001.33	86.300	162.600	5419.58	392.06 S	316.57 E	502.84	3.282
6038.50	87.300	163.100	5421.66	427.52 S	327.52 E	538.13	3.007
6070.34	84.600	160.800	5423.91	457.71 S	337.35 E	568.48	11.127
6085.00	86.500	159.200	5425.04	471.45 S	342.35 E	582.58	16.922
6118.00	90.000	159.000	5426.05	502.26 S	354.12 E	614.54	10.623

Continued...

# Sperry-Sun Drilling Services

RU 12-24 - leg 1ST



Ratherford Unit  
Big A #25

Mobil

All data is in feet unless otherwise stated.

Coordinates are relative to Wellhead. Vertical depths are relative to Wellhead.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section was calculated along an Azimuth of 144.814° (True).

Based Upon Minimum Curvature type calculations, at a Measured Depth of 6118.00ft.,

The Bottom Hole Displacement is 614.54ft., in the Direction of 144.814° (True).

# Sperry-Sun Drilling Services

RU 12-24 - leg 1



Rutherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
200.00	1.470	0.120	199.98	2.57 N	0.01 E	-2.27	0.735
400.00	1.490	349.800	399.91	7.69 N	0.45 W	-7.02	0.133
600.00	1.600	330.630	599.84	12.68 N	2.28 W	-12.30	0.263
800.00	2.070	314.500	799.74	17.65 N	6.23 W	-18.52	0.347
1000.00	2.230	309.500	999.60	22.65 N	11.80 W	-25.55	0.123
1200.00	2.390	302.610	1199.44	27.38 N	18.32 W	-32.75	0.160
1400.00	2.420	305.960	1399.26	32.10 N	25.25 W	-40.15	0.072
1600.00	1.800	309.070	1599.12	36.56 N	31.11 W	-46.81	0.315
1800.00	1.790	315.800	1799.03	40.78 N	35.72 W	-52.69	0.105
2000.00	1.260	318.340	1998.95	44.66 N	39.36 W	-57.82	0.267
2200.00	0.810	311.630	2198.92	47.25 N	41.88 W	-61.27	0.233
2400.00	0.900	298.440	2398.90	48.93 N	44.32 W	-63.89	0.108
2600.00	1.380	316.570	2598.86	51.43 N	47.36 W	-67.51	0.297
2800.00	1.160	327.780	2798.81	54.89 N	50.09 W	-71.85	0.165
3000.00	0.870	335.540	2998.78	57.99 N	51.80 W	-75.38	0.160
3200.00	0.480	326.750	3198.76	60.07 N	52.89 W	-77.73	0.201
3400.00	0.190	351.610	3398.76	61.10 N	53.39 W	-78.88	0.159
3600.00	0.100	326.550	3598.76	61.57 N	53.54 W	-79.37	0.054
3800.00	0.070	303.560	3798.76	61.79 N	53.74 W	-79.65	0.022
4000.00	0.110	281.100	3998.76	61.89 N	54.03 W	-79.87	0.026
4200.00	0.020	314.340	4198.76	61.95 N	54.24 W	-80.03	0.047
4400.00	0.040	236.060	4398.76	61.94 N	54.32 W	-80.05	0.020
4600.00	0.040	328.780	4598.76	61.96 N	54.42 W	-80.11	0.029
4800.00	0.200	60.050	4798.76	62.19 N	54.15 W	-80.20	0.102
5000.00	0.110	297.960	4998.76	62.46 N	54.02 W	-80.37	0.137
5200.00	0.350	342.790	5198.76	63.13 N	54.37 W	-81.13	0.141
5304.00	0.300	50.300	5302.76	63.61 N	54.25 W	-81.50	0.350
5333.00	2.900	158.000	5331.74	62.97 N	53.92 W	-80.79	10.361
5341.47	5.500	154.000	5340.19	62.41 N	53.66 W	-80.17	30.871
5346.47	7.500	151.000	5345.16	61.91 N	53.40 W	-79.60	40.559
5351.47	10.000	148.000	5350.10	61.26 N	53.01 W	-78.84	50.809
5356.47	12.400	145.000	5355.00	60.45 N	52.47 W	-77.88	49.379
5361.47	14.000	142.000	5359.87	59.53 N	51.79 W	-76.75	34.799
5366.47	15.200	139.000	5364.71	58.56 N	50.99 W	-75.52	28.360
5370.00	18.400	138.000	5368.09	57.80 N	50.31 W	-74.53	91.022
5375.00	21.300	136.000	5372.79	56.56 N	49.15 W	-72.89	59.561
5380.00	25.000	132.500	5377.39	55.19 N	47.74 W	-71.03	78.921
5383.00	26.900	128.600	5380.09	54.34 N	46.74 W	-69.81	85.101
5387.00	30.600	121.000	5383.59	53.25 N	45.16 W	-68.11	129.872
5395.00	38.100	119.200	5390.19	50.99 N	41.26 W	-64.30	94.597
5400.00	42.300	123.400	5394.01	49.31 N	38.51 W	-61.54	99.940
5405.00	47.700	128.600	5397.55	47.23 N	35.65 W	-58.37	130.591
5410.00	52.800	133.900	5400.75	44.69 N	32.77 W	-54.79	130.500
5415.00	58.400	137.800	5403.57	41.73 N	29.90 W	-50.83	129.142

Continued...

# Sperry-Sun Drilling Services

RU 12-24 - leg 1



Ratherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5421.00	63.700	142.200	5406.47	37.71 N	26.53 W	-45.71	109.153
5429.00	69.500	144.700	5409.65	31.81 N	22.17 W	-38.46	77.959
5439.00	75.600	148.000	5412.65	23.87 N	16.89 W	-28.98	68.636
5449.00	76.800	147.500	5415.03	15.66 N	11.70 W	-19.30	12.945
5463.83	75.800	149.900	5418.55	3.35 N	4.22 W	-4.92	17.108
5495.01	77.200	150.800	5425.83	23.00 S	10.78 E	25.37	5.295
5526.76	79.800	151.500	5432.15	50.25 S	25.79 E	56.48	8.469
5558.65	80.200	152.200	5437.69	77.94 S	40.60 E	87.88	2.499
5589.65	80.600	152.200	5442.86	104.97 S	54.86 E	118.45	1.290

All data is in feet unless otherwise stated.

Coordinates are relative to Wellhead. Vertical depths are relative to Wellhead.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section was calculated along an Azimuth of 152.408° (True).

Based Upon Minimum Curvature type calculations, at a Measured Depth of 5589.65ft.,

The Bottom Hole Displacement is 118.45ft., in the Direction of 152.408° (True).

# Sperry-Sun Drilling Services

RU 12-24 - leg 2



Ratherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
200.00	1.470	0.120	199.98	2.57 N	0.01 E	1.55	0.735
400.00	1.490	349.800	399.91	7.69 N	0.45 W	5.00	0.133
600.00	1.600	330.630	599.84	12.68 N	2.28 W	9.48	0.263
800.00	2.070	314.500	799.74	17.65 N	6.23 W	15.62	0.347
1000.00	2.230	309.500	999.60	22.65 N	11.80 W	23.09	0.123
1200.00	2.390	302.610	1199.44	27.38 N	18.32 W	31.14	0.160
1400.00	2.420	305.960	1399.26	32.10 N	25.25 W	39.52	0.072
1600.00	1.800	309.070	1599.12	36.56 N	31.11 W	46.88	0.315
1800.00	1.790	315.800	1799.03	40.78 N	35.72 W	53.10	0.105
2000.00	1.260	318.340	1998.95	44.66 N	39.36 W	58.35	0.267
2200.00	0.810	311.630	2198.92	47.25 N	41.88 W	61.92	0.233
2400.00	0.900	298.440	2398.90	48.93 N	44.32 W	64.88	0.108
2600.00	1.380	316.570	2598.86	51.43 N	47.36 W	68.81	0.297
2800.00	1.160	327.780	2798.81	54.89 N	50.09 W	73.08	0.165
3000.00	0.870	335.540	2998.78	57.99 N	51.80 W	76.31	0.160
3200.00	0.480	326.750	3198.76	60.07 N	52.89 W	78.43	0.201
3400.00	0.190	351.610	3398.76	61.10 N	53.39 W	79.46	0.159
3600.00	0.100	326.550	3598.76	61.57 N	53.54 W	79.86	0.054
3800.00	0.070	303.560	3798.76	61.79 N	53.74 W	80.15	0.022
4000.00	0.110	281.100	3998.76	61.89 N	54.03 W	80.44	0.026
4200.00	0.020	314.340	4198.76	61.95 N	54.24 W	80.65	0.047
4400.00	0.040	236.060	4398.76	61.94 N	54.32 W	80.71	0.020
4600.00	0.040	328.780	4598.76	61.96 N	54.42 W	80.79	0.029
4800.00	0.200	60.050	4798.76	62.19 N	54.15 W	80.72	0.102
5000.00	0.110	297.960	4998.76	62.46 N	54.02 W	80.78	0.137
5200.00	0.360	342.790	5198.76	63.13 N	54.37 W	81.46	0.141
5304.00	0.300	50.300	5302.76	63.61 N	54.25 W	81.66	0.350
5320.00	4.300	303.400	5318.74	63.96 N	54.72 W	82.25	27.479
5328.00	8.800	309.100	5326.69	64.51 N	55.45 W	83.16	56.765
5338.00	19.000	316.200	5336.38	66.18 N	57.17 W	85.54	103.228
5348.00	30.000	323.300	5345.47	69.37 N	59.80 W	89.56	113.687
5361.00	44.100	332.600	5355.83	76.03 N	63.85 W	96.81	116.448
5371.98	53.700	340.500	5363.04	83.61 N	67.09 W	103.98	102.758
5391.00	71.700	337.100	5371.73	99.29 N	73.22 W	118.33	95.941
5403.74	73.200	337.500	5375.57	110.49 N	77.91 W	128.83	12.148
5434.71	77.600	336.500	5383.38	138.07 N	89.62 W	154.83	14.547
5466.43	78.800	331.000	5389.87	165.91 N	103.35 W	182.58	17.389
5498.21	79.100	325.400	5395.97	192.41 N	119.77 W	211.68	17.320
5530.03	80.200	320.600	5401.69	217.39 N	138.61 W	241.79	15.236
5561.02	82.800	315.400	5406.27	240.16 N	159.11 W	271.88	18.594
5583.00	85.000	313.400	5408.60	255.45 N	174.73 W	293.56	13.492
5591.83	84.200	314.000	5409.44	261.52 N	181.08 W	302.29	11.307
5623.59	78.800	310.800	5414.13	282.70 N	204.26 W	333.55	19.705
5655.38	84.300	308.300	5418.80	302.70 N	228.50 W	364.96	18.968

Continued...

# Sperry-Sun Drilling Services

RU 12-24 - leg 2



Ratherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5686.33	88.500	306.200	5420.74	321.40 N	253.08 W	395.84	15.166
5704.00	90.700	305.600	5420.87	331.76 N	267.39 W	413.50	12.905
5717.29	92.800	305.700	5420.46	339.50 N	278.19 W	426.78	15.819
5732.00	91.000	302.000	5419.97	347.68 N	290.39 W	441.45	27.958
5748.99	90.400	299.900	5419.76	356.42 N	304.96 W	458.34	12.854
5765.00	89.000	298.100	5419.85	364.18 N	318.96 W	474.19	14.243
5780.80	90.200	298.800	5419.96	371.71 N	332.86 W	489.80	8.793
5792.00	91.800	298.800	5419.76	377.10 N	342.67 W	500.88	14.285
5802.00	93.400	298.600	5419.31	381.90 N	351.43 W	510.76	16.124
5812.00	95.300	297.900	5418.55	386.62 N	360.21 W	520.61	20.241
5822.00	96.400	297.400	5417.53	391.24 N	369.03 W	530.43	12.072
5832.00	97.600	297.100	5416.31	395.78 N	377.85 W	540.20	12.364
5844.53	96.900	295.500	5414.73	401.29 N	388.99 W	552.41	13.845
5876.27	94.000	291.400	5411.72	413.86 N	417.97 W	583.09	15.773
5908.10	89.400	289.700	5410.77	425.02 N	447.75 W	613.57	15.406
5939.94	87.900	286.500	5411.52	434.91 N	478.00 W	643.65	11.097
5971.70	90.000	285.300	5412.10	443.61 N	508.54 W	673.24	7.615
6002.76	90.200	287.400	5412.05	452.35 N	538.34 W	702.27	6.792
6033.57	90.500	287.000	5411.86	461.46 N	567.77 W	731.23	1.623
6065.30	91.000	291.800	5411.45	472.00 N	597.69 W	761.44	15.208
6097.06	91.500	297.100	5410.75	485.13 N	626.59 W	792.40	16.758
6125.00	89.900	302.000	5410.41	498.91 N	650.88 W	820.08	18.447
6167.89	86.700	306.900	5411.69	523.15 N	686.22 W	862.89	13.640
6198.99	84.600	306.700	5414.04	541.72 N	711.05 W	893.90	6.783
6230.62	86.700	303.400	5416.44	559.83 N	736.86 W	925.41	12.341
6262.38	88.600	305.800	5417.75	577.85 N	762.98 W	957.10	9.633
6281.00	89.100	308.100	5418.12	589.04 N	777.86 W	975.72	12.638
6311.00	88.000	308.100	5418.88	607.54 N	801.46 W	1005.71	3.667

All data is in feet unless otherwise stated.

Coordinates are relative to Wellhead. Vertical depths are relative to Wellhead.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section was calculated along an Azimuth of 307.164° (True).

Based Upon Minimum Curvature type calculations, at a Measured Depth of 6311.00ft.,  
The Bottom Hole Displacement is 1005.71ft., in the Direction of 307.164° (True).

# Sperry-Sun Drilling Services

RU 12-24 - leg 3



Rutherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5276.00	0.260	31.460	5275.98	10.21 N	6.25 E	-4.33	
5284.00	3.800	103.400	5282.73	63.41 N	54.06 W	-83.21	46.595
5290.00	7.200	126.570	5288.71	63.14 N	53.57 W	-82.69	66.587
5295.00	10.400	134.010	5293.65	62.64 N	52.99 W	-81.94	67.798
5300.00	13.700	138.050	5298.54	61.89 N	52.27 W	-80.91	68.082
5305.00	17.200	140.570	5303.35	60.88 N	51.40 W	-79.58	71.260
5310.00	20.600	142.300	5308.08	59.61 N	50.40 W	-77.96	68.910
5315.00	23.800	143.560	5312.71	58.10 N	49.26 W	-76.07	64.701
5320.00	26.400	144.530	5317.24	56.39 N	48.01 W	-73.95	52.646
5325.00	29.300	145.300	5321.66	54.47 N	46.67 W	-71.62	58.443
5330.00	33.300	145.920	5325.93	52.33 N	45.21 W	-69.02	80.258
5335.00	36.700	146.450	5330.03	49.95 N	43.61 W	-66.16	68.271
5340.00	39.900	146.890	5333.95	47.36 N	41.91 W	-63.07	64.232
5345.00	42.800	147.280	5337.70	44.59 N	40.11 W	-59.78	58.228
5350.00	45.500	147.620	5341.29	41.65 N	38.24 W	-56.31	54.207
5355.00	47.700	147.930	5344.73	38.58 N	36.30 W	-52.69	44.230
5360.00	49.800	148.200	5348.02	35.39 N	34.32 W	-48.95	42.196
5365.00	53.400	148.450	5351.13	32.05 N	32.26 W	-45.05	72.106
5370.00	56.400	148.680	5354.00	28.56 N	30.13 W	-40.98	60.118
5375.00	59.100	148.900	5356.67	24.95 N	27.94 W	-36.77	54.128
5380.00	61.300	149.100	5359.16	21.23 N	25.70 W	-32.46	44.137
5385.00	63.200	151.970	5361.48	17.37 N	23.53 W	-28.08	63.434
5390.00	65.300	154.740	5363.66	13.35 N	21.51 W	-23.66	65.217
5395.00	66.700	157.410	5365.69	9.17 N	19.66 W	-19.21	56.245
5400.00	69.200	160.000	5367.57	4.86 N	17.97 W	-14.76	69.314
5405.00	71.900	163.020	5369.23	0.39 N	16.48 W	-10.30	78.478
5410.00	74.900	165.950	5370.66	4.23 S	15.20 W	-5.85	82.175
5415.00	79.300	168.800	5371.78	8.98 S	14.14 W	-1.43	104.064
5420.00	82.200	170.500	5372.58	13.84 S	13.25 W	2.97	67.006
5425.00	83.500	170.700	5373.20	18.73 S	12.44 W	7.36	26.301
5429.00	84.900	172.200	5373.61	22.67 S	11.85 W	10.84	51.155
5445.86	84.700	170.800	5375.14	39.27 S	9.37 W	25.55	8.354
5477.67	84.100	168.000	5378.24	70.39 S	3.54 W	53.83	8.961
5508.67	85.400	167.200	5381.08	100.54 S	3.09 E	81.82	4.918
5539.51	85.400	165.500	5383.55	130.41 S	10.34 E	109.98	5.495
5571.26	84.100	163.000	5386.46	160.83 S	18.92 E	139.38	8.846
5603.04	84.300	161.200	5389.67	190.92 S	28.64 E	169.19	5.670
5633.99	84.800	159.900	5392.61	219.97 S	38.90 E	198.52	4.483
5664.95	88.100	159.200	5394.52	248.92 S	49.69 E	228.08	10.895
5696.74	85.000	155.300	5396.44	278.18 S	61.96 E	258.79	15.653
5728.54	86.900	154.000	5398.68	306.84 S	75.54 E	289.81	7.234
5760.35	89.000	152.400	5399.82	335.21 S	89.87 E	321.07	8.297
5792.15	91.100	151.000	5399.79	363.21 S	104.95 E	352.47	7.937
5823.89	91.400	148.000	5399.10	390.55 S	121.05 E	383.97	9.497
5855.70	92.200	146.000	5398.10	417.21 S	138.36 E	415.68	6.769

Continued...

# Sperry-Sun Drilling Services

RU 12-24 - leg 3



Ratherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5887.53	92.400	143.800	5396.82	443.23 S	156.65 E	447.46	6.935
5919.31	91.000	142.000	5395.88	468.56 S	175.81 E	479.22	7.173
5950.37	88.900	139.000	5395.91	492.53 S	195.56 E	510.25	11.790
5981.34	86.800	135.500	5397.07	515.25 S	216.57 E	541.05	13.172
6012.52	85.800	132.900	5399.08	536.94 S	238.87 E	571.83	8.918
6043.52	88.200	131.100	5400.71	557.65 S	261.88 E	602.24	9.672
6075.24	88.500	129.400	5401.62	578.14 S	286.07 E	633.21	5.440
6107.01	89.200	127.600	5402.26	597.91 S	310.93 E	664.00	6.078
6136.23	88.000	125.200	5402.97	615.24 S	334.44 E	692.04	9.181
6168.05	87.000	123.900	5404.36	633.27 S	360.62 E	722.25	5.151
6199.83	87.000	125.500	5406.02	651.34 S	386.71 E	752.43	5.028
6230.91	88.000	128.500	5407.38	670.02 S	411.51 E	782.33	10.166
6261.87	89.600	130.900	5408.03	689.79 S	435.32 E	812.48	9.315
6277.00	91.700	131.800	5407.86	699.79 S	446.68 E	827.32	15.100
6293.66	91.600	132.200	5407.38	710.93 S	459.05 E	843.68	2.474
6308.00	91.700	133.600	5406.96	720.69 S	469.55 E	857.81	9.784
6324.63	92.000	134.400	5406.43	732.23 S	481.51 E	874.24	5.135
6356.35	91.600	133.400	5405.43	754.21 S	504.35 E	905.57	3.394
6388.12	90.900	132.400	5404.74	775.84 S	527.62 E	936.87	3.842
6419.89	91.110	132.300	5404.18	797.23 S	551.10 E	968.12	0.732
6451.60	91.800	133.400	5403.37	818.79 S	574.34 E	999.36	4.094
6482.71	91.100	134.400	5402.59	840.36 S	596.75 E	1030.09	3.923
6514.33	90.500	134.800	5402.15	862.56 S	619.26 E	1061.39	2.280
6546.15	90.600	135.000	5401.84	885.02 S	641.80 E	1092.92	0.703
6577.84	87.900	134.300	5402.25	907.28 S	664.34 E	1124.29	8.802
6609.64	89.000	133.900	5403.11	929.41 S	687.16 E	1155.72	3.681
6641.39	90.600	132.700	5403.23	951.18 S	710.27 E	1187.05	6.299
6673.26	91.300	131.300	5402.70	972.50 S	733.95 E	1218.36	4.911
6703.26	91.300	131.300	5402.02	992.29 S	756.48 E	1247.76	0.000

All data is in feet unless otherwise stated.

Coordinates are relative to Wellhead. Vertical depths are relative to Wellhead.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section was calculated along an Azimuth of 142.680° (True).

Based Upon Minimum Curvature type calculations, at a Measured Depth of 6703.26ft.,  
The Bottom Hole Displacement is 1247.76ft., in the Direction of 142.680° (True).

# Sperry-Sun Drilling Services

RU 12-24 - leg 4



Ratherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5264.00	0.260	22.520	5263.98	11.03 N	4.57 E	2.18	
5273.00	3.000	316.700	5271.74	63.60 N	54.50 W	80.37	32.258
5283.00	6.400	314.640	5281.70	64.18 N	55.08 W	81.17	34.036
5293.00	10.200	312.580	5291.59	65.17 N	56.13 W	82.59	38.110
5303.00	14.800	310.520	5301.35	66.60 N	57.75 W	84.73	46.208
5313.00	19.900	308.460	5310.90	68.49 N	60.06 W	87.69	51.361
5323.00	25.200	306.400	5320.13	70.82 N	63.11 W	91.51	53.578
5333.00	29.900	304.340	5328.99	73.49 N	66.88 W	96.13	47.950
5343.00	33.500	302.280	5337.50	76.37 N	71.27 W	101.38	37.588
5353.00	36.200	300.220	5345.71	79.33 N	76.16 W	107.09	29.451
5363.00	40.400	298.160	5353.55	82.35 N	81.57 W	113.28	43.893
5373.00	45.300	296.100	5360.88	85.44 N	87.62 W	120.04	50.958
5383.00	51.400	294.040	5367.52	88.60 N	94.39 W	127.43	62.906
5393.00	56.700	291.980	5373.39	91.76 N	101.84 W	135.40	55.557
5403.00	62.100	289.920	5378.48	94.83 N	109.88 W	143.81	56.832
5413.00	68.000	287.860	5382.70	97.76 N	118.45 W	152.60	61.882
5423.00	74.500	285.800	5385.91	100.50 N	127.51 W	161.68	67.860
5433.00	78.200	283.740	5388.27	102.97 N	136.90 W	170.91	42.066
5438.00	78.900	281.800	5389.26	104.06 N	141.68 W	175.51	40.523
5447.01	80.800	277.200	5390.85	105.52 N	150.43 W	183.63	54.499
5472.00	90.900	275.600	5392.66	108.29 N	175.17 W	205.88	40.916
5509.83	89.900	278.800	5392.40	113.03 N	212.69 W	239.92	8.862
5540.66	89.200	282.100	5392.64	118.62 N	243.00 W	268.38	10.941
5572.41	88.900	284.700	5393.16	125.98 N	273.88 W	298.28	8.242
5604.21	88.800	286.300	5393.80	134.47 N	304.52 W	328.60	5.040
5635.15	88.700	288.800	5394.48	143.80 N	334.01 W	358.40	8.085
5666.11	88.300	290.000	5395.29	154.08 N	363.20 W	388.48	4.064
5697.90	88.900	292.700	5396.06	165.65 N	392.80 W	419.60	8.698
5729.71	88.200	294.800	5396.87	178.46 N	421.90 W	450.98	6.957
5761.46	90.700	296.900	5397.17	192.30 N	450.47 W	482.47	10.283
5793.28	89.700	299.500	5397.06	207.33 N	478.51 W	514.18	8.754
5825.11	91.600	300.700	5396.70	223.29 N	506.04 W	545.96	7.060
5856.87	89.600	304.400	5396.37	240.38 N	532.81 W	577.71	13.242
5887.95	87.900	304.400	5397.05	257.93 N	558.45 W	608.77	5.470
5918.93	88.200	304.800	5398.10	275.51 N	583.93 W	639.72	1.613
5950.11	88.200	306.000	5399.08	293.57 N	609.33 W	670.86	3.847
5981.11	88.800	306.500	5399.89	311.89 N	634.33 W	701.80	2.519
6012.83	89.600	307.600	5400.34	331.00 N	659.64 W	733.44	4.288
6044.59	89.700	306.500	5400.53	350.13 N	684.99 W	765.12	3.478
6076.37	90.700	306.700	5400.42	369.08 N	710.50 W	796.84	3.209
6108.08	91.400	306.900	5399.84	388.07 N	735.89 W	828.48	2.296
6139.17	91.200	307.400	5399.13	406.84 N	760.66 W	859.48	1.732
6170.85	91.400	307.800	5398.41	426.17 N	785.75 W	891.05	1.411
6202.65	91.700	307.800	5397.55	445.65 N	810.87 W	922.73	0.943
6234.32	90.400	307.100	5396.97	464.91 N	836.01 W	954.30	4.662

Continued...

# Sperry-Sun Drilling Services

RU 12-24 - leg 4



Ratherford Unit  
Big A #25

Mobil

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6266.12	92.100	307.200	5396.28	484.10 N	861.35 W	986.01	5.355
6297.95	91.300	308.000	5395.33	503.52 N	886.55 W	1017.72	3.554
6329.75	89.600	308.300	5395.09	523.16 N	911.56 W	1049.39	5.429
6361.61	89.900	308.600	5395.22	542.97 N	936.51 W	1081.11	1.332
6393.34	91.000	308.500	5394.97	562.74 N	961.32 W	1112.69	3.481
6424.39	89.500	308.300	5394.84	582.03 N	985.66 W	1143.61	4.874
6456.17	89.300	308.800	5395.17	601.83 N	1010.51 W	1175.24	1.694
6488.02	90.000	308.500	5395.37	621.73 N	1035.38 W	1206.93	2.391
6519.89	89.200	309.500	5395.59	641.78 N	1060.15 W	1238.63	4.018
6551.69	90.000	310.600	5395.81	662.24 N	1084.49 W	1270.19	4.277
6583.53	90.300	311.600	5395.73	683.17 N	1108.48 W	1301.71	3.279
6615.38	90.000	312.700	5395.64	704.55 N	1132.10 W	1333.16	3.580
6647.11	89.200	314.600	5395.87	726.45 N	1155.05 W	1364.35	6.497
6678.85	89.800	316.900	5396.14	749.18 N	1177.20 W	1395.31	7.489
6704.00	91.100	317.300	5395.95	767.60 N	1194.32 W	1419.70	5.408
6735.01	91.100	317.300	5395.35	790.39 N	1215.34 W	1449.75	0.000

All data is in feet unless otherwise stated.

Coordinates are relative to Wellhead. Vertical depths are relative to Wellhead.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section was calculated along an Azimuth of 303.038° (True).

Based Upon Minimum Curvature type calculations, at a Measured Depth of 6735.01ft.,  
The Bottom Hole Displacement is 1449.75ft., in the Direction of 303.038° (True).

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

5. Lease Designation and Serial No.

14-20-603-246A

6. If Indian, Allottee or Tribe Name

NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation

RATHERFORD UNIT

8. Well Name and No.

RATHERFORD 12-W-24

9. API Well No.

43-037-31151

10. Field and Pool, or exploratory Area

GREATER ANETH

11. County or Parish, State

SAN JUAN UT

SUBMIT IN TRIPLICATE

1. Type of Well

Oil Well  Gas Well  Other

2. Name of Operator

MOBIL PRODUCING TX & NM INC.\*  
\*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM

3. Address and Telephone No.

P.O. Box 633, Midland TX 79702 (915) 688-2585

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SEC. 12, T41S, R23E  
775' FSL & 1980' FEL

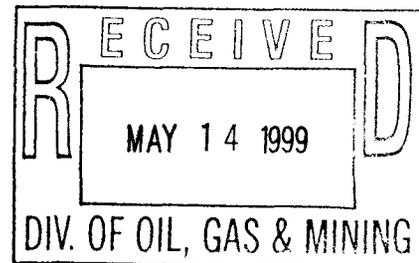
12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other MIT CHART	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

SEE ATTACHED CHART.



14. I hereby certify that the foregoing is true and correct

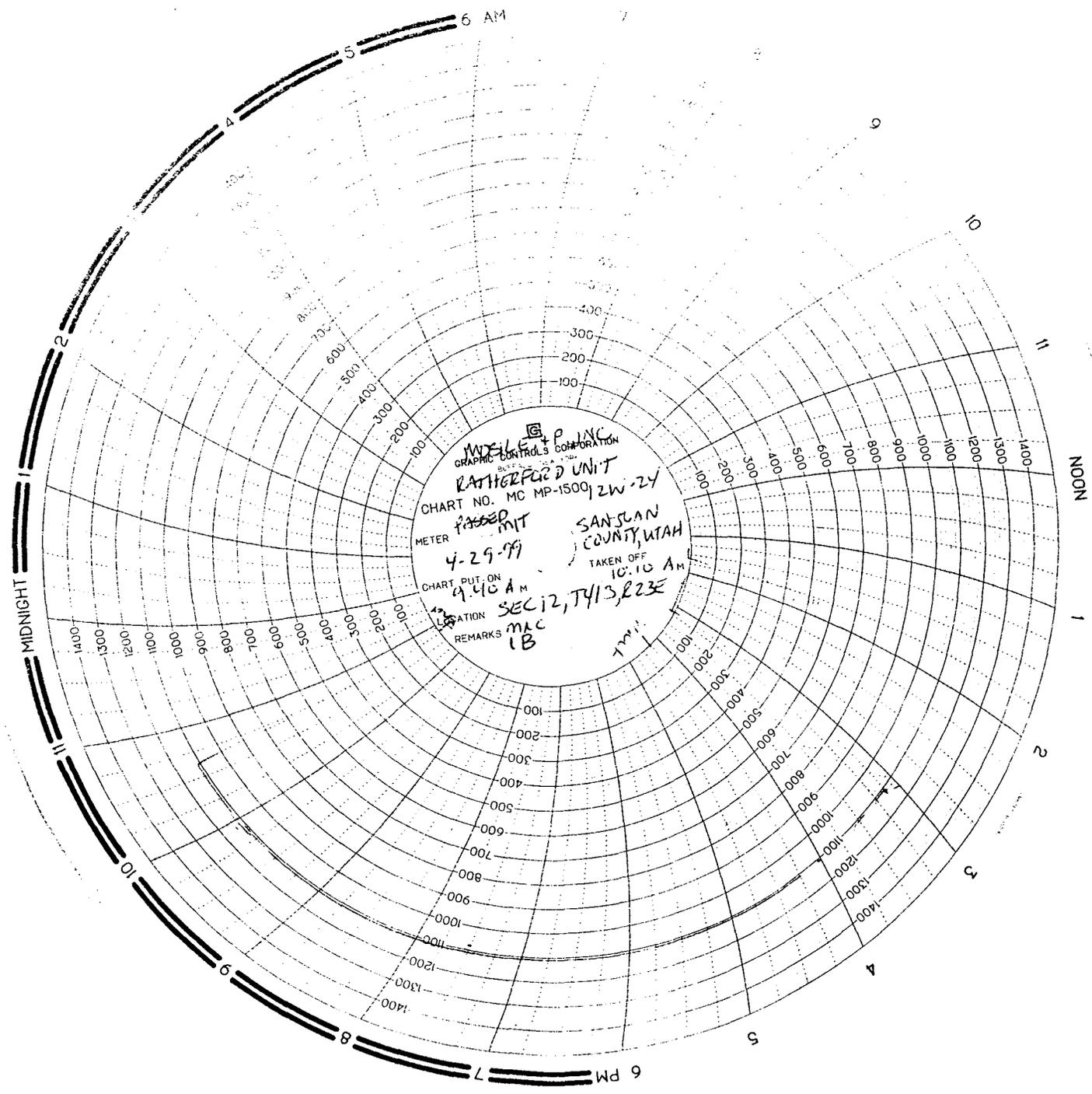
Signed Shirley Houchins for Title SHIRLEY HOUCHINS/ENV & REG TECH Date 5-11-99

(This space for Federal or State office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_  
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\* See Instruction on Reverse Side



WHEELING  
GRAPHIC CONTROLS CORPORATION  
RATHERFORD UNIT  
CHART NO. MC MP-1500 2W-24  
METER PASSED MIT  
4-29-79  
CHART PUT ON 9:40 AM  
LOCATION SEC 12, T41S, R23E  
REMARKS MLC 1B

SANJUAN  
COUNTY, UTAH  
TAKEN OFF  
10:10 AM

T.M.P.

NOON

MIDNIGHT

6 AM  
5  
4  
3  
2  
1  
NOON  
1  
2  
3  
4  
5  
6 PM

1400  
1300  
1200  
1100  
1000  
900  
800  
700  
600  
500  
400  
300  
200  
100

**ExxonMobil Production Company**

U.S. West

P.O. Box 4358

Houston, Texas 77210-4358

June 27, 2001

**ExxonMobil**  
*Production*

Mr. Jim Thompson  
State of Utah, Division of Oil, Gas and Mining  
1549 West North Temple  
Suite 1210  
Salt Lake City, UT 84114-5801

Change of Name – Mobil Oil Corporation to  
ExxonMobil Oil Corporation

Dear Mr. Thompson

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

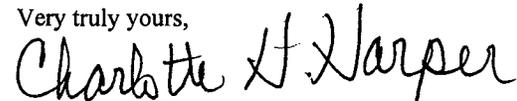
Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

A copy of the Certification, Bond Rider and a list of wells are attached.

If you have any questions please feel free to call Joel Talavera at 713-431-1010

Very truly yours,



Charlotte H. Harper  
Permitting Supervisor

ExxonMobil Production Company  
a division of Exxon Mobil Corporation,  
acting for ExxonMobil Oil Corporation

RECEIVED

JUN 27 2001

DIVISION OF  
OIL, GAS AND MINING



# United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

XXXXXXXXXXXXXXXXXXXX  
Navajo Area Office  
NAVAJO REGION

P.O. Box 1060  
Gallup, New Mexico 87305-1060

**AUG 30 2001**

IN REPLY REFER TO:

RRES/543

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Charlotte H. Harper, Permitting Supervisor  
Exxon Mobil Production Company  
U. S. West  
P. O. Box 4358  
Houston, TX 77210-4358

Dear Ms. Harper:

This is to acknowledge receipt of your company's name change from Mobil Oil Corporation to ExxonMobil Oil Corporation effective June 1, 2001. The receipt of documents includes the Name Change Certification, current listing of Officers and Directors, Listing of Leases, Financial Statement, filing fees of \$75.00 and a copy of the Rider for Bond Number 8027 31 97. There are no other changes.

Please note that we will provide copies of these documents to other concerned parties. If you need further assistance, you may contact Ms. Bertha Spencer, Realty Specialist, at (928) 871-5938.

Sincerely,

**GERMINE DENETSONE**

Regional Realty Officer

cc: BLM, Farmington Field Office w/enclosures ✓  
Navajo Nation Minerals Office, Attn: Mr. Akhtar Zaman, Director/w enclosures

<b>MINERAL RESOURCES</b>	
ADM 1	<i>DMC</i>
NATV AM MIN COORD	
SOLID AM TEAM	
PETRO AMPT TEAM	<i>2</i>
O & G INSPECT TEAM	
ALL TEAM LEADERS	
LAND RESOURCES	
ENVIRONMENT	
FILES	

**ExxonMobil Production Company**  
U.S. West  
P.O. Box 4358  
Houston, Texas 77210-4358

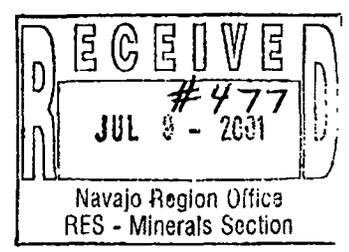
*AB 7/12/2001*  
*SH*  
*543*  
*File*

June 27, 2001

**ExxonMobil**  
Production

Certified Mail  
Return Receipt Requested

Ms. Genni Denetsone  
United States Department of the Interior  
Bureau of Indian Affairs, Navajo Region  
Real Estate Services  
P. O. Box 1060  
Gallup, New Mexico 87305-1060  
Mail Code 543



Change of Name -  
Mobil Oil Corporation to  
ExxonMobil Oil Corporation

Dear Ms. Denetsone:

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

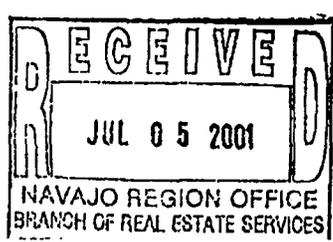
The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

Attached is the Name Change Certification, Current listing of Officers and Directors, Filing Fee of \$75/-. Listing of Leases, Financial Statement and a copy of the Rider for Bond number 8027 31 97. The original Bond Rider has been sent to Ms. Barbar Davis at your Washington Office.

If you have any questions , please contact Alex Correa at (713) 431-1012.

Very truly yours,  
*Charlotte H. Harper*  
Charlotte H. Harper  
Permitting Supervisor

Attachments



ExxonMobil Production Company  
a division of Exxon Mobil Corporation,  
acting for ExxonMobil Oil Corporation

*NOTE: Check forwarded to Ella Issa*

Bureau of Indian Affairs  
Navajo Region Office  
Attn: RRES - Mineral and Mining Section  
P.O. Box 1060  
Gallup, New Mexico 87305-1060

Gentlemen:

The current listing of officers and director of ExxonMobil Oil Corporation (Name of Corporation), of New York (State) is as follows:

OFFICERS

President	<u>F.A. Risch</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Vice President	<u>K.T. Koonce</u>	Address <u>800 Bell Street Houston, TX 77002</u>
Secretary	<u>F.L. Reid</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Treasure	<u>B.A. Maher</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>

DIRECTORS

Name	<u>D.D. Humphreys</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>P.A. Hanson</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>T.P. Townsend</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>B.A. Maher</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>
Name	<u>F.A. Risch</u>	Address <u>5959 Las Colinas Blvd. Irving, TX 75039</u>

Sincerely,



Alex Correa

This is to certify that the above information pertaining to ExxonMobil Oil Corporation (Corporation) is true and correct as evidenced by the records and accounts covering business for the State of Utah and in the custody of Corporation Service Company (Agent), Phone: 1 (800) 927-9800 whose business address is One Utah Center, 201 South Main Street, Salt Lake City, Utah 84111-2218



Signature

AGENT AND ATTORNEY IN FACT

Title

**CERTIFICATION**

I, the undersigned Assistant Secretary of ExxonMobil Oil Corporation. (formerly Mobil Oil Corporation), a corporation organized and existing under the laws of the State of New York, United States of America, DO HEREBY CERTIFY, That, the following is a true and exact copy of the resolutions adopted by the Board of Directors on May 22, 2001:

**CHANGE OF COMPANY NAME**

WHEREAS, the undersigned Directors of the Corporation deem it to be in the best interest of the Corporation to amend the Certificate of Incorporation of the Corporation to change the name and principal office of the Corporation:

NOW THEREFORE BE IT RESOLVED, That Article 1st relating to the corporate name is hereby amended to read as follows:

"1st The corporate name of said Company shall be,

ExxonMobil Oil Corporation",

FURTHER RESOLVED, That the amendment of the Corporation's Certificate of Incorporation referred to in the preceding resolutions be submitted to the sole shareholder of the Corporation entitled to vote thereon for its approval and, if such shareholder gives its written consent, pursuant to Section 803 of the Business Corporation Law of the State of New York, approving such amendment, the proper officers of the Corporation be, and they hereby are, authorized to execute in the name of the Corporation the Certificate of Amendment of Certificate of Incorporation, in the form attached hereto;

FURTHER RESOLVED, That the proper officers of the Corporation be and they hereby are authorized and directed to deliver, file and record in its behalf, the Certificate of Amendment of Certificate of Incorporation, and to take such action as may be deemed necessary or advisable to confirm and make effective in all respects the change of this Company's name to EXXONMOBIL OIL CORPORATION.

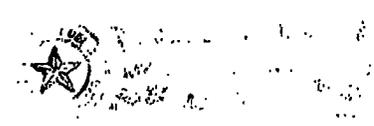
WITNESS, my hand and the seal of the Corporation at Irving, Texas, this 8th day of June, 2001.

*D. A. Miller*  
Assistant Secretary

COUNTY OF DALLAS )  
STATE OF TEXAS )  
UNITED STATES OF AMERICA )

Sworn to and subscribed before me at Irving, Texas, U. S. A. on this the 8th day of June, 2001.

*Janice M. Phillips*  
Notary Public



**LISTING OF LEASES OF MOBIL OIL CORPORATION****Lease Number**

- 1) 14-20-0603-6504
- 2) 14-20-0603-6505
- 3) 14-20-0603-6506
- 4) 14-20-0603-6508
- 5) 14-20-0603-6509
- 6) 14-20-0603-6510
- 7) 14-20-0603-7171
- 8) 14-20-0603-7172A
- 9) 14-20-600-3530
- 10) 14-20-603-359
- 11) 14-20-603-368
- 12) 14-20-603-370
- 13) 14-20-603-370A
- 14) 14-20-603-372
- 15) 14-20-603-372A
- 16) 14-20-603-4495
- 17) 14-20-603-5447
- 18) 14-20-603-5448
- 19) 14-20-603-5449
- 20) 14-20-603-5450
- 21) 14-20-603-5451

6/1/01

# CHUBB GROUP OF INSURANCE COMPANIES

1000 West Loop South, Suite 1400, Houston, Texas 77027-3501  
Telephone: (713) 297-4600 • Facsimile: (713) 297-4750

*NW Bond*

**FEDERAL INSURANCE COMPANY RIDER**  
to be attached to and form a part of

**BOND NO 8027 31 97**

wherein

**Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc. is**  
named as Principal and

**FEDERAL INSURANCE COMPANY AS SURETY,**

**in favor of United States of America, Department of the Interior**  
**Bureau of Indian Affairs**

**in the amount of \$150,000.00**

**bond date: 11/01/65**

IT IS HEREBY UNDERSTOOD AND AGREED THAT effective June 1, 2001  
the name of the Principal is changed

**FROM: Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc.**

**TO : ExxonMobil Oil Corporation**

All other terms and conditions of this Bond are unchanged.

Signed, sealed and dated this 12<sup>th</sup> of June, 2001.

**ExxonMobil Oil Corporation**

By: 

**FEDERAL INSURANCE COMPANY**

By:   
**Mary Pierson, Attorney-in-fact**



**POWER  
OF  
ATTORNEY**

**Federal Insurance Company  
Vigilant Insurance Company  
Pacific Indemnity Company**

**Attn.: Surety Department  
15 Mountain View Road  
Warren, NJ 07059**

Know All by These Presents, That **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, and **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, do each hereby constitute and appoint **R.F. Bobo, Mary Pierson, Philana Berros, and Jody E. Specht of Houston, Texas**-----

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY** have each executed and attested these presents and affixed their corporate seals on this 10th day of May, 2001.

Kenneth C. Wendel, Assistant Secretary

Frank E. Robertson, Vice President

STATE OF NEW JERSEY } ss.  
County of Somerset

On this 10th day of May, 2001, before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, to me known to be Assistant Secretary of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY**, the companies which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel being by me duly sworn, did depose and say that he is Assistant Secretary of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY** and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with Frank E. Robertson, and knows him to be Vice President of said Companies; and that the signature of Frank E. Robertson, subscribed to said Power of Attorney is in the genuine handwriting of Frank E. Robertson, and was thereto subscribed by authority of said ~~Robertson~~ **Robertson** in the presence of **Karen A. Price**.



Notary Public State of New Jersey  
No. 2231647

Notary Public

Commission Expires Oct 28, 2004

Extract from the By-Laws of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY**:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Kenneth C. Wendel, Assistant Secretary of **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY** (the "Companies") do hereby certify that

- (i) the foregoing extract of the By-Laws of the Companies is true and correct,
- (ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U. S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U. S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
- (iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this 12th day of June, 2001



Kenneth C. Wendel, Assistant Secretary

**IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903-3485 Fax (908) 903-3656 e-mail: surety@chubb.com**

CSC

5184334741

06/01 '01 08:46 NO.410 03/05

CSC

06/01 '01 09:06 NO.135 02/04

F010601000187

CERTIFICATE OF AMENDMENT  
OF  
CERTIFICATE OF INCORPORATION  
OF  
MOBIL OIL CORPORATION

CSC 45

(Under Section 805 of the Business Corporation Law)

Pursuant to the provisions of Section 805 of the Business Corporation Law, the undersigned President and Secretary, respectively, of Mobil Oil Corporation hereby certify:

**FIRST:** That the name of the corporation is MOBIL OIL CORPORATION and that said corporation was incorporated under the name of Standard Oil Company of New York.

**SECOND:** That the Certificate of Incorporation of the corporation was filed by the Department of State, Albany, New York, on the 10th day of August, 1882.

**THIRD:** That the amendments to the Certificate of Incorporation effected by this Certificate are as follows:

(a) Article 1st of the Certificate of Incorporation, relating to the corporate name, is hereby amended to read as follows:

"1st The corporate name of said Company shall be,  
ExxonMobil Oil Corporation",

(b) Article 7th of the Certificate of Incorporation, relating to the office of the corporation is hereby amended to read as follows:

The office of the corporation within the State of New York is to be located in the County of Albany. The Company shall have offices at such other places as the Board of Directors may from time to time determine.

CSC  
CSC

5184334741

06/01 '01 08:47 NO.410 04/05  
06/01 '01 09:06 NO.133 03/04

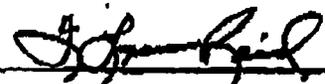
**FOURTH:** That the amendments to the Certificate of Incorporation were authorized by the Board of Directors followed by the holder of all outstanding shares entitled to vote on amendments to the Certificate of Incorporation by written consent of the sole shareholder dated May 22, 2001.

IN WITNESS WHEREOF, this Certificate has been signed this 22nd Day of May, 2001.

  
\_\_\_\_\_  
F. A. Risch, President 

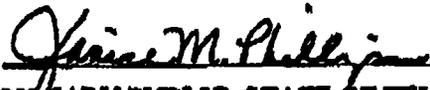
STATE OF TEXAS        )  
COUNTY OF DALLAS    )

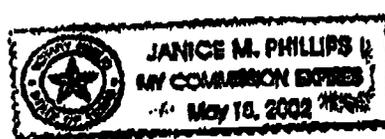
F. L. REID, being duly sworn, deposes and says that he is the Secretary of MOBIL OIL CORPORATION, the corporation mentioned and described in the foregoing instrument; that he has read and signed the same and that the statements contained therein are true.

  
\_\_\_\_\_  
F. L. REID, Secretary

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this the 22nd day of May, 2001.

[SEAL]

  
\_\_\_\_\_  
NOTARY PUBLIC, STATE OF TEXAS



CSC  
CSC

5184334741

06/01 '01 09:01 NO. 411 02/02  
06/01 '01 09:06 NO. 152 04/04  
**F010601000187**

**CSC 45**

**CERTIFICATE OF AMENDMENT**

**OF**

**MOBIL OIL CORPORATION**

**Under Section 605 of the Business Corporation Law**

*SAC*

**STATE OF NEW YORK  
DEPARTMENT OF STATE**

*100 cc*

Filed by: EXXONMOBIL CORPORATION

FILED JUN 01 2001

(Name)

TAX \$

6959 Las Colinas Blvd.

BY: *SAC*

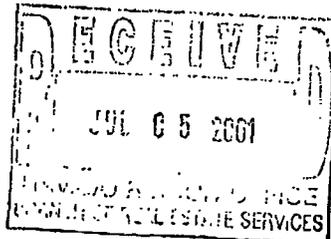
(Mailing address)

*ny Albany*

Irving, TX 75039-2298

(City, State and Zip code)

*Cust Ref # 165578 MPJ*



**010601000195**

*State of New York* }  
*Department of State* } ss:

*I hereby certify that the annexed copy has been compared with the original document in the custody of the Secretary of State and that the same is a true copy of said original.*

*Witness my hand and seal of the Department of State on* **JUN 01 2001**



A handwritten signature in black ink, appearing to read "J. Leuch", followed by a long horizontal line extending to the right.

*Special Deputy Secretary of State*

**OPERATOR CHANGE WORKSHEET**

**ROUTING**

1. GLH
2. CDW
3. FILE

Change of Operator (Well Sold)

Designation of Agent

**X Operator Name Change**

Merger

The operator of the well(s) listed below has changed, effective: **06-01-2001**

<b>FROM: (Old Operator):</b>	<b>TO: ( New Operator):</b>
MOBIL EXPLORATION & PRODUCTION	EXXONMOBIL OIL CORPORATION
Address: P O BOX DRAWER "G"	Address: U S WEST P O BOX 4358
CORTEZ, CO 81321	HOUSTON, TX 77210-4358
Phone: 1-(970)-564-5212	Phone: 1-(713)-431-1010
Account No. N7370	Account No. N1855

**CA No. Unit: RATHERFORD**

**WELL(S)**

NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
1-24	01-41S-23E	43-037-15839	6280	INDIAN	WI	A
N DESERT CR 44-2 (2-44)	02-41S-23E	43-037-16386	99990	INDIAN	WI	A
11-42	11-41S-23E	43-037-15841	6280	INDIAN	WI	A
11-44	11-41S-23E	43-037-15842	6280	INDIAN	WI	A
12-11	12-41S-23E	43-037-15843	6280	INDIAN	WI	A
RATHERFORD 12-W-22	12-41S-23E	43-037-15845	6280	INDIAN	WI	A
12-31	12-41S-23E	43-037-15847	6280	INDIAN	WI	A
RATHERFORD 12-W-33	12-41S-23E	43-037-15848	6280	INDIAN	WI	A
12-42	12-41S-23E	43-037-15850	6280	INDIAN	WI	A
N DESERT CR 13-12 (12-13)	12-41S-23E	43-037-16404	99990	INDIAN	WI	A
RATHERFORD U 12-24	12-41S-23E	43-037-31151	6280	INDIAN	WI	A
RATHERFORD U 12-W-44A	12-41S-23E	43-037-31543	6280	INDIAN	WI	A
13-W-13	13-41S-23E	43-037-15851	6280	INDIAN	WI	A
13-22	13-41S-23E	43-037-15852	6280	INDIAN	WI	A
13-24	13-41S-23E	43-037-15853	6280	INDIAN	WI	A
13-31	13-41S-23E	43-037-15854	6280	INDIAN	WI	A
RATHERFORD 13-W-33	13-41S-23E	43-037-15855	6280	INDIAN	WI	A
13-42	13-41S-23E	43-037-15857	6280	INDIAN	WI	A
N DESERT CR 44-13 (13W44)	13-41S-23E	43-037-16407	99990	INDIAN	WI	A
RATHERFORD U 13-W-11	13-41S-23E	43-037-31152	6280	INDIAN	WI	A

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 06/29/2001
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 06/29/2001
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database** on: 04/09/2002
4. Is the new operator registered in the State of Utah: YES Business Number: 579865-0143
5. If **NO**, the operator was contacted on: N/A

6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BIA-06/01/01

7. **Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: 06/01/2001

8. **Federal and Indian Communization Agreements ("CA"):**

The BLM or BIA has approved the operator for all wells listed within a CA on: N/A

9. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: N/A

**NOTE: EPA ISSUES UIC PERMIT**

**DATA ENTRY:**

1. Changes entered in the **Oil and Gas Database** on: 04/09/2002

2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 04/9/2002

3. Bond information entered in RBDMS on: N/A

4. Fee wells attached to bond in RBDMS on: N/A

**STATE WELL(S) BOND VERIFICATION:**

1. State well(s) covered by Bond Number: N/A

**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: N/A

**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: 80273197

**FEE WELL(S) BOND VERIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number N/A

2. The **FORMER** operator has requested a release of liability from their bond on: N/A

The Division sent response by letter on: N/A

**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

**COMMENTS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

<b>ROUTING</b>
1. DJJ
2. CDW

**X Change of Operator (Well Sold)**

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:		<b>6/1/2006</b>
<b>FROM:</b> (Old Operator): N1855-ExxonMobil Oil Corporation PO Box 4358 Houston, TX 77210-4358 Phone: 1 (281) 654-1936	<b>TO:</b> ( New Operator): N2700-Resolute Natural Resources Company 1675 Broadway, Suite 1950 Denver, CO 80202 Phone: 1 (303) 534-4600	
<b>CA No.</b>	<b>Unit:</b>	<b>RATHERFORD (UIC)</b>

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/21/2006
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/24/2006
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/7/2006
- Is the new operator registered in the State of Utah: YES Business Number: 5733505-0143
- If **NO**, the operator was contacted on: \_\_\_\_\_
- (R649-9-2)Waste Management Plan has been received on: requested
- Inspections of LA PA state/fee well sites complete on: n/a
- Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM n/a BIA not yet
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: not yet
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/12/2006

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 6/22/2006
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 6/22/2006
- Bond information entered in RBDMS on: n/a
- Fee/State wells attached to bond in RBDMS on: n/a
- Injection Projects to new operator in RBDMS on: 6/22/2006
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: n/a
- Indian well(s) covered by Bond Number: PA002769
- (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a
- The **FORMER** operator has requested a release of liability from their bond on: n/a  
The Division sent response by letter on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

**COMMENTS:**

---



---

**STATE OF UTAH**  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF OIL, GAS AND MINING

UIC FORM 5

**TRANSFER OF AUTHORITY TO INJECT**

Well Name and Number See attached list		API Number Attached
Location of Well		Field or Unit Name Rutherford Unit
Footage: See attached list	County: San Juan	Lease Designation and Number See attached list
QQ, Section, Township, Range:	State: UTAH	

**EFFECTIVE DATE OF TRANSFER:** 6/1/2006

**CURRENT OPERATOR**

Company: Exxon Mobil Oil Corporation Name: \_\_\_\_\_  
 Address: PO Box 4358 Signature: \_\_\_\_\_  
city Houston state TX zip 77210-4358 Title: \_\_\_\_\_  
 Phone: (281) 654-1936 Date: \_\_\_\_\_  
 Comments: Exxon Mobil has submitted a separate, signed copy of UIC Form 5

**NEW OPERATOR**

Company: Resolute Natural Resources Company Name: Dwight E Mallory  
 Address: 1675 Broadway, Suite 1950 Signature:   
city Denver state CO zip 80202 Title: Regulatory Coordinator  
 Phone: (303) 534-4600 Date: 4/20/2006  
 Comments: A list of affected UIC wells is attached.  
 New bond numbers for these wells are:  
 BIA Bond # PA002769 and US EPA Bond # B001252

(This space for State use only)

Transfer approved by:   
 Title: Field Operations Manager Approval Date: 6/12/06

Comments:

**RECEIVED**  
**APR 24 2006**  
 DIV. OF OIL, GAS & MINING

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: See attached list
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo Tribe
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Unit Agreement</u>		7. UNIT or CA AGREEMENT NAME: Ratherford Unit
2. NAME OF OPERATOR: Resolute Natural Resources Company <u>N2700</u>		8. WELL NAME and NUMBER: See attached list
3. ADDRESS OF OPERATOR: 1675 Broadway, Suite 1950 CITY Denver STATE CO ZIP 80202		9. API NUMBER: Attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>See attached list</u> COUNTY: <u>San Juan</u>		10. FIELD AND POOL, OR WILDCAT: Greater Aneth
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: _____ STATE: <u>UTAH</u>		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective June 1, 2006 Exxon Mobil Oil Corporation resigns as operator of the Ratherford Unit. Also effective June 1, 2006 Resolute Natural Resources Company is designated as successor operator of the Ratherford Unit.

A list of affected producing and water source wells is attached. A separate of affected injection wells is being submitted with UIC Form 5, Transfer of Authority to Inject.

As of the effective date, bond coverage for the affected wells will transfer to BIA Bond # PA002769.

NAME (PLEASE PRINT) <u>Dwight E Malloy</u>	TITLE <u>Regulatory Coordinator</u>
SIGNATURE	DATE <u>4/20/2006</u>

(This space for State use only)

**APPROVED** 6127106  
*Earlene Russell*  
Division of Oil, Gas and Mining (See Instructions on Reverse Side)  
Earlene Russell, Engineering Technician

**RECEIVED**  
**APR 24 2006**  
DIV. OF OIL, GAS & MINING

(5/2000)

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>Ship Rock</b>
		7. UNIT or CA AGREEMENT NAME: <b>UTU68931A</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Injection</u>	8. WELL NAME and NUMBER: <b>Ratherford</b>	
2. NAME OF OPERATOR: <b>ExxonMobil Oil Corporation</b> <i>N1855</i>		9. API NUMBER: <b>attached</b>
3. ADDRESS OF OPERATOR: <b>P.O. Box 4358</b> CITY <b>Houston</b> STATE <b>TX</b> ZIP <b>77210-4358</b>	PHONE NUMBER: <b>(281) 654-1936</b>	10. FIELD AND POOL, OR WILDCAT: <b>Aneth</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE:		COUNTY: <b>San Juan</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>6/1/2006</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

ExxonMobil Oil Corporation is transferring operatorship of Greater Aneth field, Ratherford lease to Resolute Natural Resources Company. All change of operator notices should be made effective as of 7:00 AM MST on June 1, 2006.

Attached please find a listing of injection wells included in the transfer.

NAME (PLEASE PRINT) Laurie Kilbride TITLE Permitting Supervisor

SIGNATURE *Laurie S. Kilbride* DATE 4/19/2006

(This space for State use only) **APPROVED** 6/27/06  
*Earlene Russell*  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician  
(See Instructions on Reverse Side)

RECEIVED  
APR 21 2006

**GREATER ANETH FIELD UIC WELL LIST**  
**Ratherford lease, San Juan County, Utah**

Reg Lease Name	Well ID	API Num	Status	Reg Lease #	Surface Location						
					Qtr 1	Qtr 2	Sec	TN	RNG	NS Foot	EW Foot
RATHERFORD UNIT	1W24	430371583900S1	Shut-in	14-20-603-246A	NE	SE	1	41S	23E	0651FSL	3300FEL
RATHERFORD UNIT	2W44	430371638600S1	Active	14-20-603-246A	SE	SE	2	41S	23E	0810FSL	0510FEL
RATHERFORD UNIT	11W42	430371584100S1	Active	14-20-603-246A	SE	NE	11	41S	23E	3290FSL	4617FWL
RATHERFORD UNIT	11W44	430371584200S1	Shut-in	14-20-603-246A	SE	SE	11	41S	23E	0660FSL	0558FEL
RATHERFORD UNIT	12W11	430371584300S1	Active	14-20-603-246A	NW	NW	12	41S	23E	0678FNL	4620FEL
RATHERFORD UNIT	12W13	430371640400S1	Active	14-20-603-246A	NW	SW	12	41S	23E	1980FSL	4620FEL
RATHERFORD UNIT	12W22	430371584501S1	Active	14-20-603-246A	SE	NW	12	41S	23E	1920FNL	2080FWL
RATHERFORD UNIT	12W24	430373115101S1	Active	14-20-603-246A	SE	SW	12	41S	23E	0775FSL	1980FWL
RATHERFORD UNIT	12W31	430371584700S1	Active	14-20-603-246A	NW	NE	12	41S	23E	0661FNL	1981FEL
RATHERFORD UNIT	12W33	430371584800S1	Active	14-20-603-246A	NW	SE	12	41S	23E	1958FSL	3300FEL
RATHERFORD UNIT	12W42	430371585000S1	Active	14-20-603-246A	SE	NE	12	41S	23E	3275FSL	0662FEL
RATHERFORD UNIT	12W44A	430373154300S1	Shut-in	14-20-603-246A	SE	SE	12	41S	23E	0772FSL	0807FEL
RATHERFORD UNIT	13W11	430373115201S1	Active	14-20-603-247A	NW	NW	13	41S	23E	0500FNL	0660FWL
RATHERFORD UNIT	13W13	430371585100S1	Active	14-20-603-247A	NW	SW	13	41S	23E	1980FSL	4620FEL
RATHERFORD UNIT	13W22	430371585200S1	Active	14-20-603-247A	SE	NW	13	41S	23E	1988FNL	3300FEL
RATHERFORD UNIT	13W24	430371585300S1	Active	14-20-603-247A	SE	SW	13	41S	23E	0660FSL	3300FEL
RATHERFORD UNIT	13W33	430371585501S1	Active	14-20-603-247A	NW	SE	13	41S	23E	1970FSL	1979FEL
RATHERFORD UNIT	13W42	430371585700S1	Shut-in	14-20-603-247A	SE	NE	13	41S	23E	2139FNL	0585FEL
RATHERFORD UNIT	13W44	430371640700S1	Active	14-20-603-247A	SE	SE	13	41S	23E	0653FSL	0659FEL
RATHERFORD UNIT	14-31	430373171700S1	Active	14-20-603-247A	NW	NE	14	41S	23E	0754FNL	1604FEL
RATHERFORD UNIT	14W42	430371586001S1	Active	14-20-603-247A	SE	NE	14	41S	23E	1976FNL	653FEL
RATHERFORD UNIT	24W31	430371586200S1	Shut-in	14-20-603-247A	NW	NE	24	41S	24E	0560FNL	1830FEL
RATHERFORD UNIT	24W42	430371586300S1	Shut-in	14-20-603-247A	SE	NE	24	41S	24E	1980FNL	0660FEL
RATHERFORD UNIT	17W12	430371572601S1	Active	14-20-603-353	SW	NW	17	41S	24E	1980FNL	510FWL
RATHERFORD UNIT	17W14	430371572700S1	Active	14-20-603-353	SW	SW	17	41S	24E	0610FSL	0510FWL
RATHERFORD UNIT	17W21	430371641601S1	Active	14-20-603-353	NE	NW	17	41S	24E	0510FNL	1830FWL
RATHERFORD UNIT	17W23	430371572801S1	Active	14-20-603-353	NE	SW	17	41S	24E	1880FSL	1980FWL
RATHERFORD UNIT	17W32	430371572900S1	TA'd	14-20-603-353	SW	NE	17	41S	24E	1830FNL	2030FEL
RATHERFORD UNIT	17W34	430371573000S1	Active	14-20-603-353	SW	SE	17	41S	24E	0560FSL	1880FEL
RATHERFORD UNIT	17W41	430371573100S1	Shut-in	14-20-603-353	NE	NE	17	41S	24E	0610FNL	0510FEL
RATHERFORD UNIT	17W43	430371641701S1	Active	14-20-603-353	NE	SE	17	41S	24E	1980FSL	0660FEL
RATHERFORD UNIT	18-43B	430373171801S1	Active	14-20-603-353	NE	SE	18	41S	24E	2023FSL	0651FEL
RATHERFORD UNIT	18W12	430373115301S1	Active	14-20-603-353	SW	NW	18	41S	24E	1980FNL	560FWL
RATHERFORD UNIT	18W14	430371573501S1	Active	14-20-603-353	SW	SW	18	41S	24E	0810FSL	0600FWL
RATHERFORD UNIT	18W21	430371641801S1	Active	14-20-603-353	NE	NW	18	41S	24E	660FNL	1882FWL
RATHERFORD UNIT	18W23	430373024400S1	Shut-in	14-20-603-353	NE	SW	18	41S	24E	2385FSL	2040FWL
RATHERFORD UNIT	18W32	430371573601S1	Active	14-20-603-353	SW	NE	18	41S	24E	2140FNL	1830FEL
RATHERFORD UNIT	18W34	430371573701S1	Active	14-20-603-353	SW	SE	18	41S	24E	780FSL	1860FEL
RATHERFORD UNIT	18W41	430371573800S1	TA'd	14-20-603-353	NE	NE	18	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	19-12	430371573901S1	Active	14-20-603-353	SW	NW	19	41S	24E	1980FNL	0600FWL
RATHERFORD UNIT	19-32	430371574301S1	Active	14-20-603-353	SW	NE	19	41S	24E	2717FNL	2802FEL
RATHERFORD UNIT	19-34	430371574401S1	Active	14-20-603-353	SW	SE	19	41S	24E	0660FSL	1980FEL
RATHERFORD UNIT	19W21	430371574100S1	Shut-in	14-20-603-353	NE	NW	19	41S	24E	0660FNL	1860FWL
RATHERFORD UNIT	19W23	430371574200S1	Shut-in	14-20-603-353	NE	SW	19	41S	24E	2080FSL	1860FWL
RATHERFORD UNIT	19W43	430371642000S1	Shut-in	14-20-603-353	NE	SE	19	41S	24E	1980FSL	0760FEL
RATHERFORD UNIT	20-12	430371574601S1	Active	14-20-603-353	SW	NW	20	41S	24E	0709FNL	0748FEL
RATHERFORD UNIT	20-14	430371574701S1	Active	14-20-603-353	SW	SW	20	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	20-32	430371574901S1	Active	14-20-603-353	SW	NE	20	41S	24E	0037FNL	0035FWL
RATHERFORD UNIT	20-34	430371575001S1	Active	14-20-603-353	SW	SE	20	41S	24E	0774FNL	0617FWL
RATHERFORD UNIT	20-67	430373159000S1	Active	14-20-603-353	NE	SW	20	41S	24E	2629FSL	1412FWL
RATHERFORD UNIT	20W21	430371642300S1	Active	14-20-603-353	NE	NW	20	41S	24E	0660FNL	1880FWL
RATHERFORD UNIT	20W23	430371574800S1	Active	14-20-603-353	NW	SW	20	41S	24E	2080FSL	2120FWL
RATHERFORD UNIT	20W41	430371575100S1	Active	14-20-603-353	NE	NE	20	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	20W43	430371642400S1	TA'd	14-20-603-353	NE	SE	20	41S	24E	2070FSL	0810FEL
RATHERFORD UNIT	16W12	430371572000S1	Active	14-20-603-355	SW	NW	16	41S	24E	1880FNL	0660FWL

**GREATER ANETH FIELD UIC WELL LIST**  
**Ratherford lease, San Juan County, Utah**

Reg Lease Name	Well ID	API Num	Status	Reg Lease #	Surface Location						
					Qtr 1	Qtr 2	Sec	TN	RNG	NS Foot	EW Foot
RATHERFORD UNIT	16W14	430371572100S1	Shut-in	14-20-603-355	SW	SW	16	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	16W21	430371641400S1	Active	14-20-603-355	NE	NW	16	41S	24E	0660FNL	1880FWL
RATHERFORD UNIT	16W23	430371572201S1	Active	14-20-603-355	NE	SW	16	41S	24E	1980FSL	1980FWL
RATHERFORD UNIT	16W43	430371641501S1	Active	14-20-603-355	NE	SE	16	41S	24E	2140FSL	0820FEL
RATHERFORD UNIT	21-14	430371575301S1	Active	14-20-603-355	SW	SW	21	41S	24E	0660FSL	0460FWL
RATHERFORD UNIT	21-67	430373175301S1	Active	14-20-603-355	NE	SW	21	41S	24E	2560FSL	1325FWL
RATHERFORD UNIT	21W21	430371642501S1	Active	14-20-603-355	NE	NW	21	41S	24E	0660FNL	2030FWL
RATHERFORD UNIT	6W14	430371598400S1	Active	14-20-603-368	NE	SE	6	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	7W12	430371598500S1	Active	14-20-603-368	NE	SE	7	41S	24E	2140FNL	0585FWL
RATHERFORD UNIT	7W14	430371598600S1	Active	14-20-603-368	NE	SE	7	41S	24E	1065FSL	0660FWL
RATHERFORD UNIT	7W21	430371639400S1	Active	14-20-603-368	NE	NW	7	41S	24E	0710FNL	1820FWL
RATHERFORD UNIT	7W34	430371598900S1	Active	14-20-603-368	SW	SE	7	41S	24E	0710FSL	2003FEL
RATHERFORD UNIT	7W43	430371639500S1	Active	14-20-603-368	NE	SE	7	41S	24E	2110FSL	0660FEL
RATHERFORD UNIT	8W14	430371599200S1	Active	14-20-603-368	SW	NE	8	41S	24E	0745FSL	0575FWL
RATHERFORD UNIT	10W43	430371640300S1	TA'd	14-20-603-4037	NE	SE	10	41S	24E	1980FSL	0550FEL
RATHERFORD UNIT	29-12	430371533701S1	Active	14-20-603-407	SW	NW	29	41S	24E	2870FNL	1422FWL
RATHERFORD UNIT	29-32	430371533901S1	Active	14-20-603-407	SW	NE	29	41S	24E	0694FNL	0685FWL
RATHERFORD UNIT	29W21	430371643200S1	Active	14-20-603-407	NE	NW	29	41S	24E	0667FNL	2122FWL
RATHERFORD UNIT	29W41	430371643300S1	Active	14-20-603-407	NE	NE	29	41S	24E	0557FNL	0591FEL
RATHERFORD UNIT	29W43	430371643400S1	Shut-in	14-20-603-407	NE	SE	29	41S	24E	1980FSL	0660FEL
RATHERFORD UNIT	30W41	430371534300S1	Shut-in	14-20-603-407	NE	NE	30	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	28-12	430371533601S1	Active	14-20-603-409	SW	SE	28	41S	24E	2121FNL	0623FWL
RATHERFORD UNIT	28W21	430371643100S1	Shut-in	14-20-603-409	NE	NW	28	41S	24E	0660FNL	2022FWL
RATHERFORD UNIT	9W23	430371639800S1	Active	14-20-603-5046	NW	SE	9	41S	24E	1980FSL	1980FWL